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MOTHERS' PERCEPTIONS OF NEIGHBORHOOD DISORDER ARE ASSOCIATED WITH CHILDREN'S HOME ENVIRONMENT QUALITY

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This study examines how low-income mothers' perceptions of their neighborhoods are associated with the home environments they provide for their young children. The connection between neighborhoods and homes is important since they are nested systems that are critical to children's healthy development. Women's perception of their neighborhoods may affect the way they set up their homes and interact with their young children. Given that various women may perceive the same neighborhood differently, this study uses subjective, rather than typical objective measures of neighborhood disadvantage. After controlling for maternal background characteristics, including stress and depression, these data find that the more women perceive their neighborhood to be disordered, the less likely they are to provide high-quality home environments and be responsive to their infants. Establishing a link between neighborhood and home environments is important and illuminates avenues for potentially improving the contexts of young children's lives. © 2016 Wiley Periodicals, Inc.

Children are situated in different environmental contexts that greatly influence their development (Bronfenbrenner, 1979). Two important environments that affect children's well-being include the homes they live in and the neighborhoods in which their homes are situated. Home environments have been found to affect children's social and emotional development (Harden & Whittaker, 2011), early school readiness (Parker, Boak, Griffin, Ripple, & Peay, 1999), and future academic achievement (Fletcher, Walls, Cook, Madison, & Bridges, 2008). Similarly, neighborhoods also contribute to children's school readiness, achievement, and social and emotional outcomes (Leventhal & Brooks-Gunn, 2000). Although ample research explores the different environments that influence children's

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development, research exploring the connection between different levels of contexts is sparse. The relationship between how children's neighborhoods, which is an *exosystem* or a distal physical context, and their home environments, a *microsystem* or more proximal context, is unclear (Bronfenbrenner, 1979).

In considering the connection between home and neighborhood contexts, it is reasonable to assume that children's mothers contribute substantially, because mothers may be affected by the neighborhoods they live in, and these neighborhood influences may carry into how mothers interact with their children and shape their children's physical home environments. However, research connecting neighborhoods and homes seldom consider how maternal perceptions might play a role. Instead, the studies that exist rely almost exclusively on objective measures of neighborhoods gathered from census data, such as neighborhood poverty (Leventhal & Brooks-Gunn, 2000). This is insufficient, as research assessing neighborhood perceptions has shown that residents often perceive the same neighborhoods differently (Coulton, Korbin, Su, & Chow, 1995; Lee & Campbell, 1997). If mothers have incongruous perceptions of the same neighborhoods, then this implies that mothers are experiencing the same neighborhood contexts in different ways. Thus, the heterogeneity of perceptions of the same neighborhood could affect children's home environments differently.

This study first explores the relationship between self-reported neighborhood perceptions and objective measures of the neighborhood, specifically poverty rates by zip code and researchers' observational assessments of neighborhoods. Next we assess how perceptions of neighborhoods relate to the home environments mothers provide for their very young children. Last, we draw from existing literatures on neighborhood effects on mental health and maternal mental health effects on children's home environments (Guterman, Lee, Taylor, & Rathouz, 2009) to consider the possible mediating mechanisms of maternal mental health.

Significance of Home Environments

Children's home environment, specifically the opportunities for stimulation, support, interaction, and learning in the home, has important implications for their development. High-quality environments are characterized as having positive communicative and affective interactions between the caregiver and child, noncorporal disciplinary methods, stimulating and developmentally appropriate physical organization of the space, and age-appropriate toys and structure of the child's time (Caldwell & Bradley, 1984). Having high-quality home environments early on predicts children's higher cognitive scores (Harden & Whittaker, 2011; Parker et al., 1999), increases in social functioning (Foster, Lambert, Abbott-Shim, McCarty, & Franze, 2005; Harden & Whittaker, 2011), emergent literacy skills (Foster et al., 2005; Harden & Whittaker, 2011), and school readiness (Parker et al., 1999) and even decreases in behavioral problems (Harden & Whittaker, 2011).

Conversely, low-quality home environments have a detrimental effect on these areas and are associated with poorer child outcomes, such as having increased social and behavioral problems (Fletcher et al., 2008; Parker et al., 1999), decreased school readiness (Parker et al., 1999), and lower academic performance (Fletcher et al., 2008). Mothers, especially, play a notable role in shaping children's home environments.

Contributions of mothers. Most young children in the United States spend the majority of their time with their mothers (Ridgeway, 2011); thus, it is no surprise that mothers make a unique contribution in shaping the structural and affective aspects of the home

environment. Several studies have found that maternal demographic characteristics such as having higher education, income, and age predict higher quality home environments (e.g., Benasich & Brooks-Gunn, 1996; Menaghan & Parcel, 1991). Moreover, personal traits such as having a stronger internal locus of control and higher self-esteem also contribute to creating more optimal home environments (Menaghan & Parcel, 1991). In addition, maternal mental health also plays a significant role in shaping mother–child interactions (i.e., Totsika & Sylva, 2004). For example, the stress a mother associates with parenting directly affects mother–child interactions (Farmer & Lee, 2011).

Parenting stress is also related to maternal depression and higher scores on depression measures are associated with less sensitivity, affection, engagement, and more rigid parenting (Albright & Tamis-LeMonda, 2002; Farmer & Lee, 2011). Hence, when studying mother–child interactions as part of children’s home environments, it is important to include these demographic and maternal mental health characteristics to account for their potential independent effects on home environments, especially parent–child interactions.

Neighborhood Perceptions

Like home environments, neighborhoods are associated with child outcomes (Klebanov, Brooks-Gunn, Chase-Lansdale, & Gordon, 1997). Research on neighborhood quality typically uses objective and archival data, such as census data about family income, the quantity of public assistance recipients, or number of single parent households, in a given geographic location (e.g., Burton & Jarrett, 2000; Chase-Lansdale & Gordon, 1996; Leventhal & Brooks-Gunn, 2000). Other studies use observer ratings of neighborhoods instead of administrative records (e.g., observations of crime); however, these studies often find that residents’ perceptions of neighborhoods and observer ratings of neighborhoods are not highly correlated (Sampson & Raudenbush, 2004; Taylor, 2001).

Considering that residents may view the same neighborhood characteristics and boundaries differently (Coulton, Jennings, & Chan, 2013; Lee & Campbell, 1997), subjective measurements of neighborhood quality may be a more valid indicator of the influences of neighborhood quality. Supporting this, some studies find that individual perceptions of neighborhoods are more predictive of individual outcomes, such as loneliness, compared with more objective measures of neighborhoods (e.g., Furstenberg, Cook, Eccles, Elder, & Sameroff, 1999; O’Neil, Parke, & McDowell, 2001).

Perceptions of neighborhood disorder. One method of assessing an individual’s perception of neighborhood risk is the neighborhood disorder model (Skogan, 1990). In this model, neighborhood disorder is classified into social and physical disorder (Skogan, 1990). Social disorder includes fighting, arguing, burglary, drug dealing, assault, and other social incivilities in the neighborhood. While social disorder captures aspects of neighborhood danger, physical disorder is a much less severe indicator of the breakdown of control in the neighborhood. Physical disorder includes visual indicators of disorder such as poorly maintained property, graffiti, litter, and vandalism. Taken together, research shows that neighborhood disorder affects the individual’s behavioral and psychological well-being by increasing feelings of powerlessness, mistrust, fear, and distress (Ross, 2000; Ross, Mirowsky, & Pribesh, 2001), representing a breakdown of control (Skogan, 1990).

Effects of perceptions of neighborhood disorder on children. Others have proposed parental perceptions of neighborhood disorder as a construct to measure how neighborhood

quality affects children and families (Burton & Jarrett, 2000; Furstenberg et al., 1999; Martinez, Black, & Starr, 2002; O'Neil et al., 2001). These studies typically focus on parents with children in middle childhood or adolescence. For instance, in a study by Earls et al. (1994), researchers found that parental perceptions of neighborhood danger and disorder were associated with parental disciplinary strategies. Specifically, parents who perceived their neighborhoods to be more dangerous used harsher and more parent-centered discipline, such as verbal aggression with their children, than parents who reported living in less dangerous neighborhoods, and the extent of these effects varied by ethnic group. O'Neil and colleagues (2001) similarly found that mothers who perceived themselves to be living in poorer quality neighborhoods used greater amounts of supervision and limited activities more frequently than mothers in more optimal neighborhoods.

Maternal mental health and perceptions. Because parental perceptions of neighborhood disorder may affect how parents treat their children, it is reasonable to consider that parental mental health may mediate the relationship between these two contexts. Although other studies on perceptions of neighborhood disorder have found a negative effect on individuals' mental health (Ross, 2000; Ross & Mirowsky, 2009; Ross et al., 2001) and a link between maternal mental health and parenting (e.g., Oyserman, Mowbray, Meares, & Firminger, 2000), very few models examining the effects of neighborhood perceptions on children's overall home environments explicitly include maternal mental health in their analyses. Guterman and colleagues (2009) are one of the exceptions; their research found that mothers' perceptions of their neighborhoods affected their parenting stress and personal control, which indirectly played a role in predicting risk for child abuse (Guterman et al., 2009).

Because most studies linking neighborhood perceptions and parenting behavior fail to include mental health in their analyses, and the possibility that mental health may account for some of the relationship between these constructs, it is important to test for the possible mediating effect of parental mental health.

The Current Study

The current study examines the relationship between maternal perceptions of neighborhood disorder and the overall quality of the home environment mothers provide for their infants, an age group not typically included in research on neighborhoods. This study is distinct from others because it compares objective measures of neighborhoods to maternal perceptions of neighborhood disorder. Additionally, it addresses the independent contributions of mothers' perceptions of neighborhood disorder on the home and tests for the mediating mechanisms of maternal mental health. Specifically, this study seeks to answer the following questions:

RQ 1: How do maternal neighborhood perceptions compare to objectively measured neighborhood poverty rates and researcher observations of neighborhood quality?

RQ 2: Are maternal perceptions of neighborhood disorder associated with the quality of children's home environments?

RQ 3: Does maternal mental health, specifically parenting stress and depression, mediate the relationship between maternal perceptions of neighborhood disorder and children's home environments?

METHOD

Data for this study were drawn from the National Institute of Child and Human Development-funded Baby Books Project, which tested the effectiveness of baby books as a means to educate new mothers about child development, parenting, and injury prevention (Reich, Bickman, Saville, 2010; Reich, Penner, Duncan, 2011). The data selected for this study include participant and researcher ratings of neighborhood disorder, mental health measures, and the Infant-Toddler version of the Home Observation for Measurement of the Environment inventory (IT-HOME; Caldwell & Bradley, 1984), a measure of parenting quality and stimulation in the home. In the original study, first-time mothers ($N = 198$) in their third trimester of pregnancy were recruited from the waiting rooms of two obstetric resident continuity clinics. Although these two clinics were located in urban areas in the South, there was heterogeneity in the quality of neighborhoods the clinics served.

For this study, a subset of the original data, which includes perceived neighborhood disorder at 4 months, maternal mental health at 6 months, and home environment and parent-child interactions at 9 months, were used. Because these data are endogenous to the intervention and there is no reason to expect an effect of the baby books on neighborhood perceptions, data were collapsed and a group variable was included in the analyses.

Participants

Of the pregnant women recruited for the initial study, 167 participated in postpartum data collection, and 145 remained in the study until their child was 18 months. Reasons for attrition included fetal demise, infant death, lack of interest, and moving out of the area (for details, see Reich et al., 2012). For the current study, an analytic sample was created of only women with data at baseline (pregnancy) and 4, 6, and 9 months postpartum ($n = 134$). No significant differences were found from 35 comparisons of maternal characteristics between those included in the analytic sample and those with some missing data. The sample was comprised of first-time mothers who were primarily Black, non-Hispanic (64%) and receiving some form of public assistance (75%). Most of the participants were not married or partnered (82%) and the median age was 23.17 years (standard deviation [SD] = 4.67; range = 18.2–40.0). Also, over half of the women did not have any education beyond high school (55%). See Table 1 for more detail.

Measures

Maternal perceptions of neighborhood disorder. Maternal perceptions of neighborhood quality were measured when infants were 4 months old using the perceived physical and social disorder items from Perkins and Taylor's (2002) community survey. The 11-item scale of perceptions of the neighborhood ($\alpha = .93$) includes five questions about markers of physical disorder (e.g., vandalism, litter, and trash-filled vacant lots; $\alpha = .80$) and six questions about markers of social disorder (e.g., the presence of drug dealing, gang activity, and crime; $\alpha = .94$). Participants rated the presence of these markers of neighborhood disorder as none (0), some (.5), or a lot (1). The values of these responses were then summed to create variables for total disorder (mean [M] = 2.30; $SD = 2.44$; range = 0.00–10.00).

Table 1. Distribution of Study Variables

	<i>N</i>	%	Mean (<i>SD</i>)	Range
Independent variables				
Perceived neighborhood disorder			2.30 (2.44)	0.0–10.0
Education				
Less than high school	32	24		
High school diploma/GED	42	31		
Some college or higher	60	45		
Race/ethnicity				
Black, non-Hispanic	85	64		
White, non-Hispanic	34	25		
Other	15	11		
Married/living as married	24	18		
Current receipt of public assistance	100	75		
Maternal age			23.17 (4.67)	18.2–40.0
Parenting stress			62.49 (15.96)	36.0–113.0
Depression			6.23 (4.30)	0.0–21.0
Dependent variables				
Home total score			35.89 (4.56)	22.0–45.0
Subscales				
Acceptance			5.81 (1.53)	1.0–8.0
Involvement			5.11 (1.31)	1.0–6.0
Learning materials			7.11 (1.54)	2.0–9.0
Organization			5.26 (0.88)	3.0–6.0
Responsivity			8.91 (1.84)	4.0–11.0
Variety			3.69 (1.17)	1.0–5.0

Note. *SD* = standard deviation; GED = General Education Development.

Objective measures of neighborhood. Objective measures of neighborhood disorder were drawn from 2000 Census data on neighborhood poverty rates based on participants' zip codes. The percent of individuals living below the poverty rate were used for these analyses ($M = 16.81$; $SD = 10.23$; range = 1.40–37.7).

Researchers' observational ratings of neighborhood disorder were also collected when infants were 4 months old. Driving around the neighborhood, researchers completed the Community Conditions Checklist (Dupere & Perkins, 2007), rating the presence of social and physical disorder indicators: visible alcohol consumption, drug dealing, gang activity, graffiti, trash on the street, and loitering (i.e., youth and adults hanging around outside the home; $\alpha = .64$). The frequencies were summed for a total score ($M = 0.66$; $SD = 1.06$; range = 0.00–5.00).

Home environment. The overall quality of the home environment was measured using the Infant-Toddler version of the Home Observation for Measurement of the Environment (IT-HOME; Caldwell & Bradley, 1984) when infants were 9 months old. The IT-HOME systematically assesses the caring environment of the home and pays particular attention to the quality and quantity of stimulation and support to which the child is exposed. Information for the measure was obtained through observations and semistructured interviews between researchers and mothers.

The IT-HOME is comprised of 45 binary items split into six subscales: *Responsivity* measures the communicative and affective interaction between the caregiver and the child; *Acceptance* examines how parents accept their children's suboptimal behavior and deal with discipline; *Organization* measures how the child's time is allocated outside of

the home and what the child's personal space looks like; *Learning materials* accounts for the variety and age-appropriateness of children's toys; *Involvement* measures how the adult interacts physically with the child; and *Variety* measures how children's daily routines incorporate social interactions with people aside from the parents. For the study, scores for each subscale were created for each mother if at least 85% of the items were answered. Additionally, total scores for the IT-HOME were calculated if at least 85% of items were answered ($\alpha = .73$).

Maternal mental health. Two maternal mental health variables were used to assess their possible mediation between neighborhood perceptions and home environments. The 36-item Parenting Stress Index-Short Form (PSI-SF; Abidin, 1995) was used to measure stresses related to parenting. The PSI is rated on a 5-point Likert scale with the following three subscales (12 items each), which sum to a total score: *Distress* measures parental stress due to the individual's role as a parent; *Parent-Child Dysfunctional Interaction* measures the parent's perceptions of the child meeting his or her expectations; and *Difficult Child* assesses the parent's perceptions of their child's behavioral characteristics. The total score of the 10-item version of the Center for Epidemiologic Studies-Depression Scale (CESD-10; Andresen, Malmgren, Carter, & Patrick, 1994) was also used to measure levels of depressive symptoms. Responses for this scale are rated on a 4-point scale ranging from 0 (*rarely*) to 3 (*most of the time*). These mental health variables were collected when children were 6-months old.

Maternal characteristics and other control variables. Other variables used in the analyses include: maternal education level (0 = less than high school; 1 = high school diploma/General Education Development [GED]; 2 = some college or higher); race/ethnicity (0 = other; 1 = Black, non-Hispanic); age (in years); receipt of public assistance (0 = no public assistance received; 1 = public assistance received), which served as a proxy for income level since there were substantial missing data on income; marital status (0 = not married/unpartnered; 1 = married/living as married); and treatment condition (0 = no book; 1 = non-educational book; 2 = educational book). These control variables were gathered at baseline, before the baby books intervention.

Analysis

Descriptive analyses were used to assess the distribution of all variables (see Table 1). To determine how maternal neighborhood perceptions related to objective measures of neighborhood poverty rates and observer ratings of neighborhood quality (RQ 1), we ran separate correlations between these variables.

Second, to test whether maternal perceptions of neighborhood disorder were associated with the home environments mothers provide for children (RQ 2), ordinary least squares (OLS) regression were used to estimate the model, which included neighborhood disorder perceptions as the predictor variable and IT-HOME summary and subscale scores as outcome variables. The control variables in these analyses included maternal education, race/ethnicity, age, receipt of public assistance, marital status, and treatment condition.

Last, to determine whether parenting stress and depression mediated the relationship between maternal perceptions of neighborhood disorder and children's home environment (RQ 3), we conducted two separate Sobel-Goodman mediation tests.

RESULTS

On average, mothers did not perceive their neighborhoods to have many disorders ($M = 2.30$; $SD = 2.44$), but the range of perceived disorder varied greatly (range = 0.00–10.00). Similarly, the quality of the home environments varied across the sample as well ($M = 35.89$; $SD = 4.56$; range = 22.00–45.00).

RQ1: Neighborhood perceptions versus objective measures

In comparing objective and subjective ratings of neighborhood quality there was little overlap. Poverty rates by zip code were not significantly correlated with mothers' perceptions of neighborhood disorder in those same zip codes ($r = .32$). In comparing ratings within the same zip code, there was great variability in how mothers perceived the quality of the neighborhood. The 134 women in the sample lived in 36 different zip codes, with 18 zip codes having at least two participant residents. Further, 57% of the sample shared the same eight zip codes. Standard deviations for perceptions of disorder in the same zip code ranged from .69 to 3.66 out of a possible scale of 0 to 11, indicating that there can be significant variation in perceptions of the same neighborhood. Similarly, researcher observations of neighborhood disorder and maternal perceptions of neighborhood disorder were only moderately correlated ($r = .54$).

RQ2: Associations between neighborhood perceptions and home environments

Mothers' perceptions of neighborhood disorder had a statistically significant negative association with children's home environments (IT-HOME total score), even after controlling for a host of maternal characteristics ($\beta = -.21$, $p < 0.05$, $R^2 = .36$). In exploring the relationship of neighborhood perceptions with IT-HOME subscales, maternal responsiveness was the only component significantly related to neighborhood perceptions. Specifically, mothers who perceived their neighborhood to have more disorder were less likely to demonstrate responsivity in the home ($\beta = -.23$, $p < 0.05$, $R^2 = .25$). Interestingly, additional analyses found that objective measures of neighborhoods such as poverty ($\beta = -.03$, $p > 0.05$) and researcher neighborhood ratings ($\beta = -.15$, $p > 0.05$) were not significantly associated with children's home environments.

RQ 3: Mediation of maternal mental health

Last, in considering the possible mediating role of maternal stress and depression, these mental health variables did not contribute to the relationship between maternal perceptions of neighborhood disorder and children's home environment quality. Maternal stress and depression were not significantly associated with children's home environments. Similarly, maternal perceptions of neighborhood disorder were not associated with stress or depression.

DISCUSSION

This study demonstrates that how new mothers perceive the disorder of their neighborhood is associated with how they structure the home environments they provide for their very young children, which has important implications for children's developmental outcomes. These perceptions are distinct from objective measures of neighborhoods taken

Table 2. Associations Between Perceived Neighborhood Disorder and Home Environment Total and Subscales

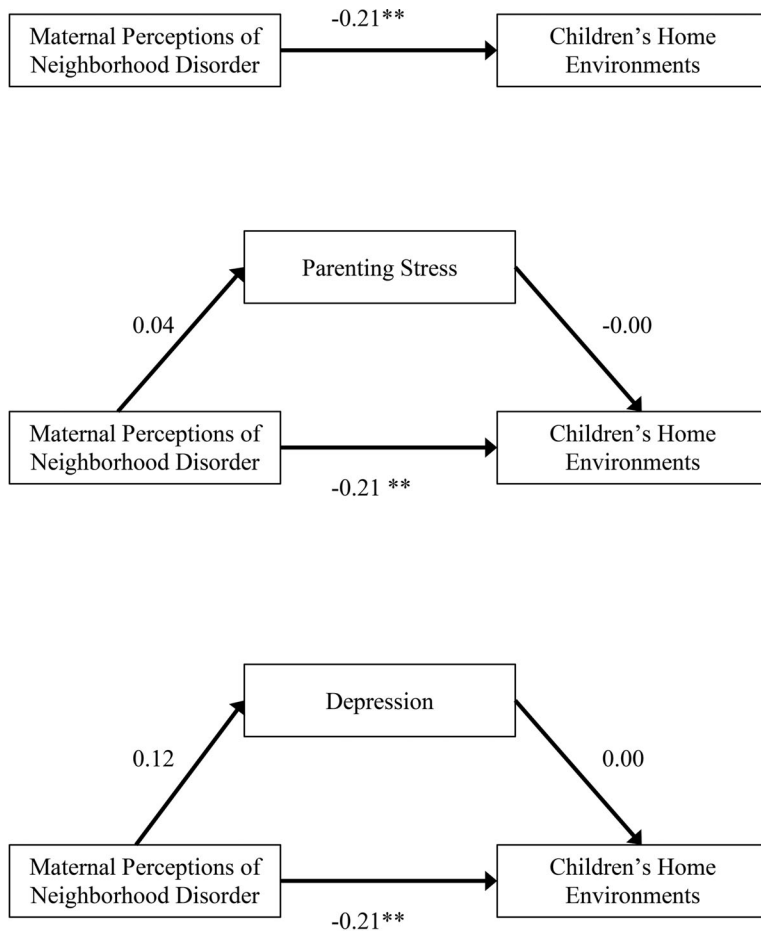
	(1) <i>HOME</i> Total score β (SE)	(2) Acceptance β (SE)	(3) Involvement β (SE)	(4) <i>Learning</i> materials β (SE)	(5) Organization β (SE)	(6) Responsivity β (SE)	(7) Variety β (SE)
Neighborhood Disorder	-0.21* (0.15)	-0.08 (0.06)	-0.04 (0.05)	-0.14 (0.06)	-0.03 (0.04)	-0.23* (0.07)	-0.09 (0.05)
Education							
Less than high school (ref)	-	-	-	-	-	-	-
High school diploma/GED	0.15 (0.96)	0.05 (0.39)	0.18 (0.32)	0.05 (0.37)	-0.08 (0.22)	0.13 (0.42)	0.11 (0.28)
Some college or higher	0.23* (1.02)	0.01 (0.41)	0.29* (0.34)	0.18 (0.39)	0.12 (0.24)	-0.01 (0.45)	0.24 (0.30)
Black, non-Hispanic	-0.38*** (0.77)	-0.19 (0.31)	-0.24* (0.26)	-0.22* (0.30)	-0.20* (0.18)	-0.24** (0.34)	-0.15 (0.23)
Married/living as married	0.07 (1.03)	0.01 (0.42)	0.10 (0.35)	0.01 (0.40)	0.05 (0.24)	-0.03 (0.45)	0.14 (0.30)
Current receipt of public assistance	-0.02 (0.83)	-0.07 (0.33)	0.05 (0.28)	-0.01 (0.32)	0.11 (0.19)	-0.03 (0.36)	-0.07 (0.24)
Maternal age	0.04 (0.08)	0.06 (0.03)	-0.17 (0.03)	0.01 (0.03)	-0.09 (0.02)	0.21* (0.04)	-0.04 (0.02)
R-squared	0.362	0.076	0.126	0.170	0.081	0.248	0.162
Observations	134	134	133	134	132	134	134

Note. SE = standard error; GED = General Education Development; ref = reference group.

* $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$.

from census data and researcher observations. Further, within the same neighborhoods, mothers have different perceptions of their neighborhood's quality and these perceptions are associated with the quality of the home environments they provide for their infants. In particular, mothers who perceived their neighborhoods to be more disordered were less likely to provide high-quality home environments for their children, especially by being less responsive to their infants. Last, this path between neighborhood perceptions and children's home quality was a direct path and not due to associations between mothers' neighborhood perceptions and their parenting stress or depression. Interestingly, objective measures of neighborhood disorder were not significantly associated with home quality. Thus, perceived neighborhood contexts are meaningfully connected to home contexts.

Importance of Perceptions. This study demonstrates that maternal perceptions of neighborhoods are different than census poverty data or observer ratings of neighborhoods. These findings that neighborhood perceptions matter aligns well with other bodies of literature that recognize the unique effects of perceptions. For instance, perceptions are important for well-being and the last several decades have robustly shown that *perceptions* of social support often matter more than *received* support (Prati & Pietrantonio, 2010; Wethington & Kessler, 1986). Similarly, perceptions of how stress affects one's health contribute to worse physical and mental health outcomes more than actual amounts of reported stress (Keller et al., 2012). Additionally, research on employment and personal control has found that while perceived control may not align with actual control, perceptions of control are associated with lower rates of depression and burnout (Glass, McKnight, & Valdimarsdottir,



* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Figure 1. Sobel–Goodman tests of the mediating role of maternal stress and depression.

1993). Given the unique and significant contributions of perceptions in different bodies of research, these findings underline the importance of maternal perceptions when measuring neighborhoods.

Maternal Responsiveness

In exploring the connection of neighborhood perceptions to home environments, the pathway was between perceived neighborhood disorder and maternal responsiveness. Maternal responsiveness is associated with nurturing parenting, as it involves the display of love, affection, and care (Benasich & Brooks-Gunn, 1996). It is also tied to parental warmth and affect, which serve as social and emotional supports to children and help children develop feelings of confidence, trust, and security, otherwise known as “attachment” (Ainsworth, Bell, & Stayton, 1974; Schlette et al., 1998). Maternal responsiveness

is a key component of parenting and highly predictive of such things as children's language development (Tamis-LeMonda, Bornstein, & Baumwell, 2001), social skills (Booth, Rose-Krasnor, McKinnon, & Rubin, 1994; Schlette et al., 1998), cognitive ability (Landry, Smith, Swank, Assel, & Vellet, 2001), and emotional and behavioral problems (Chen, Liu, & Li, 2000; Schlette et al., 1998). Parental responsiveness is a relatively stable parenting characteristic (Bradley, 1989) and there are growing cumulative effects of maternal responsiveness on children's outcomes over time (Landry et al., 2001). Thus, identifying environmental contributors to early maternal responsiveness is particularly important.

Maternal Mental Health

The findings that perceptions of neighborhood disorder are associated with maternal responsiveness to infants and not the other structural aspects of the home is interesting, especially because maternal stress and depression do not contribute to this relationship. However, the lack of a mediating role should be interpreted with caution as these mothers reported only moderate levels of parenting stress ($M = 62.49$; $SD = 15.96$; observed range = 36.0–113.0) and very few experienced depressive symptoms in the clinical range ($M = 6.23$; $SD = 4.30$; observed range = 0.0–21.0). Thus, it is quite plausible that parenting stress and depression at higher levels could influence the relationship between neighborhood perceptions and home environments. Further, perhaps stress in general, rather than parenting stress, is related to these constructs. Nonetheless, these findings are quite enlightening given that perceptions of neighborhood disorder were not associated with increased depressive symptoms and parenting stress. For mothers with moderate levels of parenting stress and depression, there was a direct link between their perceptions of neighborhood disorder and their interactions with their infant.

Racial Differences

In this sample, those who were Black, non-Hispanic were significantly more likely to have lower IT-HOME total scores and involvement, learning materials, organization, and responsivity subscale scores (see Table 2). Previous work has documented racial and ethnic variability in HOME scores (e.g., Bradley et al., 1989; Thompson et al., 1998) and this variation may be a product of cultural differences in parenting (Chaudhuri, Easterbrooks, & Davis, 2009). For instance, studies have found racial differences in beliefs and attitudes about child rearing that may support the use of physical punishment with young children (Burchinal, Skinner, & Reznick, 2010; Julian, McKenry, & McKelvey, 1994). Earls et al. (1994) similarly found that parents' place of birth was associated with different methods of disciplining children, although they did not examine parental beliefs. Further, parents of different racial and ethnic backgrounds also differ in their rates of involvement with their children (Julian et al., 1994). In these data, there were also differences in home environments based on race.

Limitations and Future Directions

These findings are not without limitations. First, the sample size limited our statistical power to detect smaller effects. Because data were missing, only a subset of the sample with complete data could be included. Further, this study included low-income, predominately African American first-time mothers of infants. It is unknown whether these findings would generalize to other groups such as higher income mothers, fathers, or women with more

than one child. Similarly, these data were collected in one region of the South and may not generalize to other geographic areas. Further, although the sample was primarily low-income women residing in urban areas, mothers' perceptions of neighborhood disorder were fairly low ($M = 2.30$; $SD = 2.44$; range = 0.00–10.00). Studies using similar measures of perceived neighborhood disorder have found comparable distributions (Dupere & Perkins, 2007). However, others who have provided a larger range of response options have found more variation in residents' responses and higher overall ratings of perceived disorder (Elo, Mykyta, Margolis, & Culhane, 2009).

Because of the possible range restriction for the neighborhood disorder scale in this study, future work should consider using a scale that allows for more variation in responses. Along these lines, this measure included both physical and social disorder. Other studies have found greater predictive validity for social disorder items (Curry, Latkin, & Davey-Rothwell, 2008; Simning, van Wijngaarden, & Conwell, 2012; Whitley & Prince, 2005). Therefore, future studies should consider including more social disorder items. Finally, future studies should include other mental health measures such as generalized stress and anxiety as well as measures of positive affect.

Conclusion

Few studies focus on the associations between maternal perceptions of neighborhood disorder and their influences on very young children's home environments. Maternal perceptions provide different information than census data or observer ratings and given that perceptions of the same neighborhood can vary and that these perceptions are associated with children's home environment quality, how neighborhoods influence perceptions can have important implications for the context in which children develop. These findings serve as a foundation for future studies to expand on the interconnected nature of neighborhood and home contexts for young children.

These findings also provide insight into ways to support women who are most at risk of providing low-quality home environments to their children. Because perceptions of neighborhood quality are important, interventions could work to improve how women perceive the disorder in their neighborhood. Ideally, we should work to improve the quality of all neighborhoods in which families reside and eliminate indicators of neighborhood disorder. However, until that occurs, interventions focused on improving maternal *perceptions* of their neighborhoods might be a beneficial and cost-effective first step in increasing the quality of young children's home environments, especially new mothers' responsiveness to their infant.

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