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The Longitudinal Relationship Between Broken Windows and Sexual Behaviors Among African American Girls in Juvenile Detention: The Moderating Effects of Sexual Sensation Seeking and Parental Monitoring

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ABSTRACT ***Objective:*** Broken windows theory has been applied in public health to understand how neighborhood disadvantage contributes to health risk and disparities. This longitudinal study examined the relationship between a broken windows index (i.e., a proxy for neighborhood disadvantage) and sexual behaviors and whether sexual sensation-seeking behaviors and parental monitoring moderated that relationship. ***Method:*** Participants were 188 African American adolescent girls incarcerated in a short-term detention facility in Atlanta, GA. Participants completed audio computer-assisted self-interviews at baseline, 3, and 6 months; interviews assessed neighborhood disadvantage, sexual risk behaviors, sexual sensation seeking, parental monitoring, and demographics. ***Results:*** Longitudinal findings indicate that the broken windows index was associated with risky sexual behaviors (e.g., condomless sex and sex while using drugs). Parental monitoring (i.e., knowledge of child activities and friends) moderated the relationship between broken windows and sexual risk behaviors. ***Conclusion:*** Future interventions should address underlying mechanisms linking structural disadvantage to sexual behaviors.

KEYWORDS: African American girls, broken windows theory, juvenile detention, sexual sensation seeking, parental monitoring

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African American youth are disproportionately represented among the more than 31 million adolescents in the United States who are involved in the juvenile justice system (Hockenberry & Puzzanchera, 2017). Justice-involved

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girls report a higher rate of sexual behaviors—including earlier sexual debut (i.e., age 13 years or younger), a higher number of lifetime sexual partners, and sex without condoms—than girls in the general population (Dembo et al., 2017; Tam et al., 2019). Partly due to the aforementioned sexual behaviors, adolescent girls in the juvenile justice system are also at high risk for sexually transmitted infections (STIs; DiClemente et al., 2014; Gillman et al., 2018; Voisin, King, et al., 2012). Given the vulnerability and the marked disparities for African American girls within the juvenile justice system, it is critical to understand factors that may contribute to or moderate the relationship between neighborhood disadvantage and sexual behaviors.

First proposed in 1982, the broken windows theory suggests that neighborhood disadvantage manifested in physical appearance can influence perceptions of the neighborhood, and those perceptions can, in turn, influence personal behavior (J. Q. Wilson & Kelling, 1982, 2015). Visual indications of neighborhood disadvantage—such as graffiti, garbage, broken windows, and violence—suggest that social, economic, and community disinvestment can contribute to additional law-breaking and disinvestment (Harcourt & Ludwig, 2006). Furthermore, deterioration of the physical environment can decrease a neighborhood's collective ability to maintain social control and reduce problematic youth behaviors (Frye et al., 2006). Neighborhood disadvantage may also manifest as poor access to health care and may contribute to poor health outcomes, including increased sexual behaviors (Cohen et al., 2000; Voisin & Kim, 2016).

Within an ecological framework, neighborhoods are understood to be part of a comprehensive system affecting behavior and health outcomes, wherein neighborhood disadvantage influences behavior. For example, in early research examining the health impacts of broken windows, neighborhoods with higher broken windows scores and more significant neighborhood disadvantage had nearly twice the rate of gonorrhea than neighborhoods with lower scores, suggesting that disadvantaged neighborhoods may diminish health-protective behaviors (Cohen et al., 2000).

Poverty, crime, and higher rates of community drug use are sometimes correlated (Harrison & Gfroerer, 1992). A recent study of Chicago, IL, neighborhoods found a significant relationship between the geographic concentration of gonorrhea and chlamydia in specific neighborhoods and higher rates of drug crime (Marotta, 2017). Research also suggests that neighborhood disadvantage is associated with an earlier sexual debut, multiple sexual partners, and exchanging sex for drugs among African American youth (Voisin & Kim, 2016). Moreover, studies have shown that higher rates of adolescent STIs, earlier sexual debut, and lower rates of adolescent condom use are concentrated within neighborhoods with high levels of economic disadvantage (Aronowitz et al., 2006; Cubbin et al., 2005).

African American girls ages 15–19 have 4.5 times the rate of chlamydia and more than 10 times the rate of gonorrhea than white girls of the same age (Centers for Disease Control and Prevention, 2017). Strong links have been found between

neighborhood disadvantage and sexual health for African American and white male adolescents (Voisin et al., 2011). However, few studies have examined how neighborhood disadvantage correlates with sexual behaviors among female African American adolescents, who are disproportionately affected by STIs. One study with African American adolescent girls in a juvenile detention center found that exposures to community trauma were associated with higher sexual risk behaviors (Seth et al., 2017).

Neighborhood Disadvantage and Sexual Behaviors

There are several ways that neighborhood disadvantage, as conceptualized by broken windows theory, may correlate with adolescent sexual behaviors. First, economically disadvantaged neighborhoods may be characterized by a paucity of social and structural capital, which can limit conventional opportunities for employment and education and contribute to deviant behaviors and attitudes, including behaviors that might culminate in contracting STIs (Sampson & Raudenbush, 2004; W. J. Wilson, 1987). Neighborhoods with high levels of poverty, food insecurity, and violence may increase psychological stress, which leads to increased risk of engaging in sexual behaviors to cope with negative affective states (Latkin et al., 2013; H. W. Wilson et al., 2012). Additionally, children's tendency to associate with peers who engage in antisocial or delinquent behavior has been linked to neighborhood disadvantage (Brody et al., 2001), and such negative peer associations often correlate with unsafe sexual behaviors (Voisin et al., 2011).

A better understanding of the relationship between neighborhood disadvantage and sexual behaviors among African American females is needed to effectively address health risks and disparities in this population; likewise, we need to understand the factors that moderate such a relationship. Sexual sensation seeking and parental monitoring have been frequently identified as predictors of sexual behaviors (e.g., Spitalnick et al., 2007; Voisin, Tan, et al., 2012), but there is little evidence of their role as moderating factors, which we examine in this study.

Sexual Sensation Seeking Moderating Neighborhood Disadvantage and Sexual Behaviors

Sexual sensation seeking is the fondness for thrilling and novel sexual stimulation and arousal and the willingness to take physical and social risks to achieve those experiences; those who engage in this behavior exhibit lower self-control and greater impulsivity (Kalichman et al., 1994). Sexual sensation seeking is associated with a greater number of sexual partners, inconsistent condom use, frequency of intercourse, exchanging sex for money (Spitalnick et al., 2007; Voisin, King, et al., 2012), and substance use (Brady & Donenberg, 2006). Among adolescents, sexual sensation seeking is associated with increased sexual behaviors (Wingood & DiClemente, 1998), leading to a greater risk of engaging in unsafe sexual behaviors (Voisin, King,

et al., 2012). Ecological perspectives on drivers of sexual behaviors among adolescents suggest that distal factors of the social environment (e.g., neighborhood poverty; community and police violence) may interact with proximal intrapersonal factors such as sensation seeking to increase unsafe sexual behaviors (Wang et al., 2016). However, sexual sensation seeking might also moderate the relationship between neighborhood disadvantage and sexual risks among African American adolescent girls, although this relationship has not been adequately studied. We hypothesized that the relationship between neighborhood disadvantage and sexual behaviors would be greater among adolescents with higher levels of sexual sensation seeking. Higher levels of sexual sensation seeking might emerge in an attempt to manage anxiety and emotionally regulate in response to living in precarious neighborhood settings.

Parental Monitoring Moderating Neighborhood Disadvantage and Sexual Behaviors

Parental monitoring—parents' attention to and tracking of a child's whereabouts and activities—is a protective factor that may mitigate the effects of neighborhood disadvantage on sexual behaviors (Dishion & McMahon, 1998). Research suggests that even if parents are unable to prevent their adolescents from affiliating with deviant peers, the negative effects of peer deviance can still be buffered by parental involvement and monitoring, which can limit the social influence of those peers (Mann et al., 2015). A meta-analysis found that parental monitoring was associated with delayed sexual intercourse and greater condom use (Dittus et al., 2015). Other research found that parental monitoring was negatively associated with STIs among adolescent girls (Bettinger et al., 2004).

In prior research with African American youth, greater parental monitoring was also associated with lower rates of substance use (Griffin et al., 2000). Parental monitoring may be relevant in understanding sexual health behaviors among adolescents in disadvantaged neighborhoods. We hypothesized that the relationship between high neighborhood disadvantage and higher sexual behavior would decrease with increased parental monitoring. In disadvantaged settings, parents may monitor more to protect their children. Girls may be perceived as more physically and sexually vulnerable, thereby triggering higher levels of parental monitoring (Fagan & Wright, 2012; Furstenberg, 1993).

Current Study and Hypotheses

In summary, structural disadvantage (as assessed by the broken windows index) is a signal that neighborhoods are economically disadvantaged. Such neighborhoods are associated with higher levels of sexual behaviors, such as low condom use, having a high number of sexual partners, and engaging in drug use during sex. In the presence of neighborhood disadvantage, parents are more inclined to monitor their children, especially girls, resulting in lower levels of sexual behaviors. However, in

economically disadvantaged neighborhoods, sexual behaviors increase when sexual sensation-seeking levels are high.

We hypothesized that (a) high neighborhood disadvantage would be directly associated with increased sexual behaviors; (b) the relationship between neighborhood disadvantage and sexual behaviors would be moderated by parental monitoring; and (c) that sexual sensation-seeking would also moderate this relationship. Findings from this study can contribute to the literature on neighborhood disadvantage and sexual behaviors and may inform development of gender and culturally relevant interventions for African American girls.

Method

Participants

The secondary data for these analyses are from a randomized controlled trial to test the efficacy of an adaptation of the HORIZONS intervention to reduce sexual risk for African American females with histories of juvenile justice involvement (DiClemente et al., 2009). The intervention consisted of individual counseling for girls in detention and in their homes following release from the detention facility. The intervention was shown to be efficacious, with participants reporting higher condom use self-efficacy, HIV/STI knowledge, and condom use skills than control-group participants (DiClemente et al., 2014).

From March 2011 to February 2012, research staff recruited African American adolescent females, ages 13–17 years, who were incarcerated in a short-term detention facility in Atlanta, GA. Detention facility staff escorted all potential participants for a confidential screening by research staff, who described the study and assessed eligibility and interest in participating. Baseline assessments were made within 7 days of admission to detention and assessed measures prior to being in detention; data collected at 3 and 6 months assessed measures following release from detention, when participants returned to their communities and homes. Data were collected via an audio computer-assisted self-interview to assess sexual risk behaviors and psychosocial variables. All three timepoints assessed participant reports of parental monitoring and other factors while they resided at home and lived in their communities.

Participants were not compensated for their participation while in the detention facility but received up to $150 for completion of all intervention sessions and scheduled assessments over the 6-month follow-up period. Of the eligible adolescent females, 93% ($N = 188$) enrolled in the study. The University of Chicago Institutional Review Board approved all study protocols.

Eligibility criteria included self-identifying as African American, being ages 13–17, and reporting willingly having vaginal intercourse with a male. Adolescents who were married, pregnant, wards of the State of Georgia, or who would be released to a restricted location (i.e., group home) were excluded from the study.

Written informed assent was obtained from adolescents, and verbal permission was obtained from parents prior to the implementation of study procedures. Following receipt of assent, eligible adolescents completed baseline assessments and were randomized to either the intervention or control conditions.

Measures

Neighborhood Disadvantage

Neighborhood disadvantage was assessed by a broken windows index developed by Cohen et al. (2000) that scored the appearance of homes and quantified the presence of graffiti, trash, and abandoned cars in census block groups. The index consisted of three questions that summed indicators of neighborhood disadvantage. The items were "On your street, are there abandoned homes or apartments?"; "On your street, are there buildings with broken windows?"; and, "On your street, are there homes with bars on the windows and doors?" Responses were dichotomous (1 = yes, 0 = no) and summed to a 3-point scale (range: 0–3). Higher scores indicated more neighborhood disadvantage. The reliability coefficients using Cronbach's alpha for the three timepoints were 0.75–0.77.

Sexual Behaviors

Sexual behaviors were assessed with a scale that summed seven items, selected based on prior studies with African American adolescent females (DiClemente et al., 2004, 2009). Participants' unsafe sexual experiences in the past 90 days were examined at baseline (in the detention facility) and at 3 and 6 months (following release from juvenile detention). Sexual behaviors were defined as "having sex while high on alcohol," "having sex while high on drugs," "having had sex without a condom," "having sex while your partner was high on alcohol," "having sex while your partner was high on drugs," "having sex with 2 or more partners at the same time," and "having vaginal, anal, or oral sex in exchange for drugs, money, food or a place to stay." All items were dichotomized, where 0 indicated never and 1 indicated the participant had engaged in the sexual behavior at least once in their lifetime. A composite score was calculated, with higher scores indicating higher levels of sexual behaviors (range: 0–7). The reliability coefficients using Cronbach's alpha for the three timepoints were 0.85–0.86.

Sexual Sensation Seeking

Sexual sensation seeking was assessed with nine items inquiring about the propensity to seek out novel sexual stimulation (i.e., "I enjoy having sex on the spur of the moment," "having sex with a new partner is exciting to me," and "stopping to use a condom during sex takes the fun out of sex") based on prior literature (Kalichman & Rompa, 1995). Responses were recorded using a 5-point Likert scale. Higher scores indicated greater sexual sensation seeking. The reliability coefficients using Cronbach's alpha for the three timepoints were 0.70–0.72.

Parental Monitoring

Parental monitoring items were based on the scale developed by Loeber & Stouthamer-Loeber (1986) and used in prior studies (Brown et al., 1993; Dishion et al., 1991). Two items were adopted for parental knowledge of friends and activities (i.e., "When you are away from home and not at school or work, does your caregiver know where you are?" and "When you are away from home and not at school or work, does your caregiver know who you are with?"). Responses were recorded using a 5-point Likert scale and summed into a final scale (range: 2–10). Higher scores indicated greater parental monitoring. The reliability coefficient using Cronbach's alpha for the three timepoints were 0.84–0.90.

Control Variables

Control variables for the present study included age, family aid, family composition, and intervention effects. Age was assessed with one variable, "What is your age in years?" Family aid was assessed by asking whether the participant or anyone that the participant lived with has ever received any of the following in the past 12 months: Temporary Assistance to Needy Families (TANF); food stamps; Women, Infants, and Children (WIC) supports; and housing subsidies (1 = yes, 0 = no). For convenience of interpretation, family composition included a question that was dichotomized as 1 = living with their mother and father and 0 = other types of families (i.e., living with mother only, father only, mother and her boyfriend/new husband, or living in another situation). The randomized condition was dichotomized, with 0 = control group and 1 = intervention group.

Data Analyses

We computed univariate analyses and pooled bivariate analyses to describe all study variables. Panel regression analysis was used to examine the relationship between the broken windows index and sexual behaviors across three timepoints. We conducted the Hausman (1978) test to determine whether our models should be specified with random or fixed effects. Panel models estimated with random effects are based on the assumption that cases in a particular data set are randomly and independently drawn from a larger population. They are used to explain the variation between individuals. Conversely, fixed-effects models do not assume that the cases are randomly drawn from a larger population and are better for analyzing changes within an individual. Consequently, any variable in the model that is constant over time (e.g., race or gender) was excluded from analysis. The Hausman (1978) test showed a chi-square value of 10.77 and a *p*-value of .09, which indicate that the models estimated with random effects are the best fit for our data. We included three main study indices (broken windows index, sexual sensation seeking, and parental monitoring), covariates (age, family aid, and family composition), and two interaction terms (*broken windows* × *sexual sensation seeking* and *broken windows* ×

parental monitoring) in the model. The percentages of missing data at the variable level were less than 4%. We used multiple imputation for missing values, which is known to be more efficient than the commonly used listwise deletion and can correct for potential bias (Young & Johnson, 2015). All analyses were performed using the statistical program Stata (Version 13.0).

Results

Descriptive Statistics

Sociodemographic characteristics of study participants are presented in Table 1. A total of 188 African American female adolescents participated, and the mean age for the three timepoints was around 15 years old ($SD = 1.05$–1.06, range: 13–18). Approximately 71% of participants reported having received at least one welfare benefit at baseline, 54% at Wave 2, and 58% at Wave 3. Just under 13% of the participants were living with both their mother and father at Wave 1; 17% were living with both parents at Waves 2 and 3. The mean of the broken windows index at Wave 1 was 0.97 ($SD = 1.14$), 0.74 ($SD = 1.05$) at Wave 2, and 0.75 ($SD = 1.08$) at Wave 3. The mean score for sexual sensation seeking at Wave 1 was 18.6 ($SD = 5.53$), which dropped to 17.72 ($SD = 5.78$) at Wave 2 and 17.23 ($SD = 5.70$) at Wave 3. The mean of parental monitoring at Wave 1 was 6.99 ($SD = 2.28$), which slightly increased to 7.74 ($SD = 2.09$) at Wave 2 and to 7.75 ($SD = 2.11$) at Wave 3. The mean score for sexual behaviors at Wave 1 was 2.07 ($SD = 1.78$, range 0–6), which decreased over time to 1.40 for Wave 2 and 1.35 ($SD = 1.56$) for Wave 3 ($SD = 1.57$).

Pooled bivariate correlations across time among the study variables are presented in Table 2. Sexual behaviors were positively associated with broken windows index

Table 1
Descriptive Statistics of the Overall Sample (N = 188)

Variables	*M* (*SD*) / *n* (%)		
	Wave 1	Wave 2	Wave 3
Age (years; range: 13–18)	15.3 (1.06)	15.5 (1.05)	15.8 (1.07)
Family aid (yes)	134 (71.3%)	93 (54.1%)	99 (57.9%)
Family composition (both parents)	24 (12.80)	30 (17.40)	30 (17.40)
Broken windows index (range: 0–3)	0.97 (1.14)	0.74 (1.05)	0.75 (1.08)
Sexual sensation seeking (range: 9–45)	18.63 (5.53)	17.72 (5.78)	17.23 (5.70)
Parental monitoring (range: 2–10)	6.99 (2.28)	7.74 (2.09)	7.75 (2.11)
Sexual behaviors (range: 0–6)	2.07 (1.78)	1.40 (1.56)	1.35 (1.57)
Intervention arm (yes)	95 (50.50)	–	–

Table 2
Pooled Bivariate Correlations of the Main Study Variables

Variable	1	2	3	4	5	6	7
1. Broken windows	1.00	–	–	–	–	–	–
2. Sexual sensation seeking	0.163***	1.00	–	–	–	–	–
3. Parental monitoring	−0.167***	−0.143**	1.00	–	–	–	–
4. Sexual behaviors	0.242**	0.345***	−0.225***	1.00	–	–	–
5. Age	−0.005	0.096*	0.117**	0.020	1.00	–	–
6. Family composition	−0.090*	−0.056	0.015	−0.061	0.056	1.00	–
7. Family aid	0.317***	0.092*	−0.028	0.048	0.042	−0.088*	1.00
8. Intervention arm	0.049	−0.050	−0.020	−0.078	0.035	−0.065	0.080

Note.
*$p < .05$.
**$p < .01$.
***$p < .001$.

scores ($r = .242$, $p = .001$) and sexual sensation seeking ($r = .163$, $p = .000$) but were inversely associated with parental monitoring ($r = -.167$, $p = .000$). We also calculated the tolerance and variance inflation factor for each independent variable in the model. All variables indicated a value < 10, implying little concern of multicollinearity.

Panel Regression Model for Sexual Behaviors

Table 3 presents the results of the panel regression model with random effects computed to predict sexual behaviors across three-time points. The overall R-square is .194, within-R-square is .057, and between-R-square is .281. The Wald chi-square (9) value of the model is 86.95, and the *p*-value is .000, indicating that the model is statistically significant.

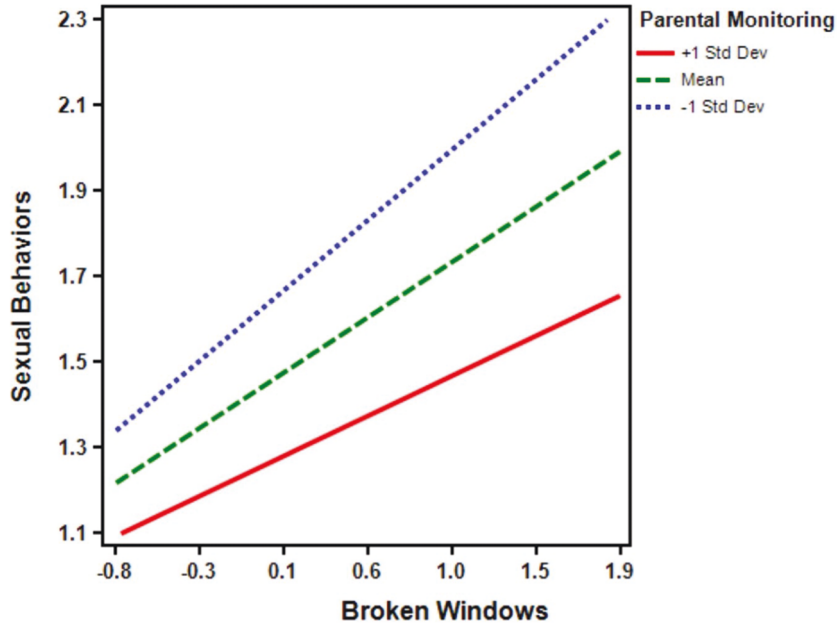
After we adjusted for the covariates, the broken windows index was associated with increased sexual behaviors over time at a statistically significant level: $B = .234$, 95% confidence interval (CI) [.088, .38]. We examined two interaction terms in the model, *broken windows* × *sexual sensation seeking* and *broken windows* × *parental monitoring*; only the interaction term between broken windows and parental monitoring was statistically significant ($B = .147$, 95% CI [.012, .281]. The simple slopes of broken windows on sexual behaviors were probed at high (+1 *SD*) and low (−1 *SD*) levels of parental monitoring (see Figure 1). As shown in Figure 1, the slope to predict sexual behaviors from the broken windows index is much steeper for low levels of parental monitoring, indicating that parental monitoring moderated the relationship between neighborhood disadvantage (i.e., broken windows index) and participants' sexual behaviors.

Table 3
Random Effect Model for Sexual Behaviors Across Three Timepoints (N = 188)

Variables	Coef.	*SE*	*t*	*P*	95% CI
Broken windows (BW)	.234	.075	3.14	.002**	[.088, .381]
Sexual sensation seeking (SSS)	.438	.073	6.01	.000***	[.296, .582]
Parental monitoring (PM)	−.266	.069	−3.83	.000***	[−.403, −.130]
BW × PM	.147	.068	2.14	.034*	[.012, .281]
BW × SSS	.087	.067	1.29	.195	[−.044, .219]
Age	.007	.075	0.10	.923	[−.141, .155]
Family aid	.018	.149	0.13	.899	[−.273, .311]
Family composition	−.052	.201	−0.26	.794	[−.445, .340]
Intervention arm	−.224	.172	−1.30	.193	[−.560, .113]

Note. Coef. = coefficient; CI = confidence interval.
*$p < .05$.
**$p < .01$.
***$p < .001$.

Figure 1. *Plots of the Moderating Effect of Parental Monitoring*



Note. Std Dev = standard deviation.

Discussion

This study assessed the extent to which parental monitoring and sexual sensation seeking moderated the longitudinal relationship between neighborhood disadvantage and sexual behaviors among adolescent girls involved in the juvenile justice system. Significant findings indicate a direct relationship between neighborhood disadvantage and sexual behaviors. In addition, parental monitoring may buffer youth from the potential negative effects of neighborhood disadvantage on sexual behaviors. More specifically, the strength of the relationship between structural disadvantage and youth sexual risk behaviors decreased in the presence of greater parental monitoring. Notably, parental monitoring increased from the baseline assessment (which assessed parental monitoring just prior to participant detention) to the 3- and 6-month assessments following participant release from detention. Parental figures may have increased monitoring after detention because detention signaled that their child needed greater support or monitoring. Prior findings have shown that parents may protect youth safety via parental monitoring in neighborhoods with high levels of crime and community violence (Li et al., 2000). Our findings suggest the positive ways in which parental monitoring might mitigate heath factors, even in the presence of neighborhood disadvantage. Future research should examine monitoring more closely to understand the impact of various types and intensity of monitoring on the relationship between neighborhood conditions and unsafe sexual behaviors.

Prior studies have documented a direct relationship between sexual sensation seeking and sexual behaviors—such as frequency of sex, the number of sexual partners, and inconsistent condom use—among African American adolescent girls (Spitalnick et al., 2007; Voisin, King, et al., 2012). However, we did not find evidence that sexual sensation seeking moderated the relationship between neighborhood disadvantage and sexual behaviors. One possible explanation is that the overall mean rates of sexual sensation seeking in the present study were lower than those reported in studies of African American females recruited from health clinics (18.89 reported by Ritchwood et al., 2014; 19.90 reported by Sales et al., 2013). In addition, the levels of sexual sensation seeking in our sample dropped across all three timepoints (i.e., from 18.6 at baseline to 17.72 at 3 months and 17.23 at 6 months); the reasons for this decrease are unclear. In addition, sexual behavior tends to increase with age (Killoren & Deutsch, 2014), but in the present study, the three timepoints are relatively short, with just 3 months between each timepoint. It is also assumed that the detention at baseline and intervention effects may have influenced the reduction of later sexual behaviors.

Limitations

Despite the contributions these findings make to the literature, as in all studies, several limitations warrant mention. First, the concept of neighborhood disadvantage is based on the frequently used broken windows index (Cohen et al., 2000). This

index is a subjective measure that assesses the perception of neighborhood disadvantage, and research has shown that younger participants have more negative perceptions of their neighborhoods than older participants (Sampson & Raudenbush, 2004). However, perceptions of neighborhood disadvantage are a useful way to gauge residents' neighborhood satisfaction and may contribute to understanding of the influence of neighborhood disadvantage on health (Elo et al., 2009). Future studies of neighborhood disadvantage should corroborate the broken windows index with census, economic, and crime data to validate the self-reported measure of neighborhood disadvantage. This study assessed subjective depictions of neighborhood disadvantage; our findings suggest that perceptions matter with regard to youth sexual behaviors. Second, the sexual risk behavior questions did not delineate between consensual and coercive sex or sexual assault. Future research should make this clear in assessment items and define consensual sex for study participants in easily understandable language. Third, the parental monitoring scale we used (Loeber & Stouthamer-Loeber, 1986) included two items from the original scale. Although reliability was relatively high, future studies should reexamine the moderating effects of parental monitoring on the relationship between broken windows and sexual behaviors using the full scale. Finally, the generalizability of our findings is limited to African American adolescent girls in situations of detention and release, and residence in communities with similar attributes to those in this study.

Conclusion

This research offers lessons for intervention design and implementation. Although not assessed in this study, previous researchers have demonstrated that enhancing adolescents' self-esteem and social competency skills may be effective at preventing HIV-risk behaviors (DiClemente et al., 2004, 2008; Metzler et al., 2000). Our findings suggest that interventions to reduce sexual behaviors that might place female adolescents at risk for contracting STIs should look beyond individual determinants of risk and also address structural drivers, such as neighborhood disadvantage. This study was among the first to longitudinally examine the relationship between neighborhood disadvantage and sexual behaviors among African American adolescent girls. Furthermore, our study demonstrated the moderating effects of parental monitoring on the relationship between neighborhood disadvantage and sexual behaviors.

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