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Community Violence Exposure and Sexual Behaviors in a Nationally Representative Sample of Young Adults: The Effects of Race/Ethnicity and Gender

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Abstract

This study examined whether exposure to community violence was related to sexual risk behaviors in a nationally representative sample of young adults and if there were gender or racial/ethnic differences in these relationships. The analytic sample for this study was drawn from the National Longitudinal Study of Adolescent Health and was composed of 7,726 unmarried, heterosexual African American, Caucasian, and Hispanic/Latino young adults aged 18 to 27 years old. Approximately 12% of participants reported some community violence exposures, with men and African Americans reporting the highest rates of such exposures. Regression analyses controlling for age, gender, parental education, and family structure indicated that exposures to community violence were associated with earlier sexual debut history, a higher number of sexual partners within the previous 12 months, and a higher number of total sexual partners. Additionally, violence exposures had stronger effects for males and weaker effects for African Americans. Primary and secondary sexual risk prevention initiatives would need to consider how patterns of sexual risk behaviors may be related to exposure to community violence and how such relationships may differ based on gender and race/ethnicity. Future research should also seek to illuminate pathways connecting these 2 major public health concerns.

Keywords

Community violence exposures; sexual behaviors; race/ethnicity; gender

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INTRODUCTION

In the United States, community violence exposure (CVE) among adolescents and young adults is a serious public health problem (Centers for Disease Control and Prevention [CDC], 2010). Community violence refers to violence occurring between individuals who are unrelated and who may or may not know each another and generally takes place outside the home. Exposure to such violence may take the form of witnessing acts of violence, hearing gun shots in the community, and/or victimization (Krug, Dahlberg, Mercy, Zwi, & Lozano, 2002). Homicide rates are one dimension of CVE, and in 2009, homicide was the second leading cause of death among youth ages 10 to 24 years old in the United States (CDC, 2010). As alarming as homicide rates may be, it is estimated that the rate of CVE in the form of non-fatalities (e.g., being a witness to or victim of robberies, muggings, or stabbings) is 120 times that of official, documented murders (Federal Bureau of Investigation, 2006).

Sexually transmitted infections (STIs) are another major public health concern among adolescents and young adults. Estimates suggest that even though young people aged 15 to 24 years old represent only 25% of the sexually experienced population, they acquire nearly half of all new cases of STIs (Weinstock, Berman, & Cates, 2004). Epidemiological studies indicate that behavioral factors, such as the early onset of sexual intercourse (i.e., at or before age 14 years) and having a high number of sexual partners, are some of the risk factors accounting for the high rates of infections among this population, which result in significant direct (e.g., clinician visits, hospitalization) and indirect medical costs (e.g., lost wages; CDC, 2010).

Emerging research documents that CVE and sexual risk behaviors are two intersecting public health concerns (Voisin, Jenkins, & Takahashi, 2011), such that youth exposed to community violence are more likely to report early sexual debut and/or engage in sexual risk behaviors (Albus, Weist, & Perez-Smith, 2004; Berenson, Wiemann, & McCombs, 2001; Brady, 2006; Stiffman, Dore, Cunningham, & Earls, 1995; Voisin, 2003, 2005; Voisin et al., 2007; Voisin, Neilands, Salazar, Crosby, & DiClemente, 2008). For instance, prior multivariate findings from a sample of 120 African American adolescent men indicated that participants who were victims of community violence were more likely than their counterparts to engage in HIV sexual risk behaviors (e.g., have sex without condoms, have sex after drug use, and report concurrent sexual partners Voisin, 2003). Findings from a racially diverse sample of 167 high school students have also corroborated that knowing a victim of community violence and victimization was positively associated with sexual risk behaviors (e.g., AIDS education, number of sexual partners, frequency of sexual activity, and STI diagnosis; Albus et al., 2004). Finally, in a study of 517 racially diverse adolescent girls seeking contraceptive care, participants who experienced violence were 2 to 4 times more likely than those who had only witnessed violence to report early sexual debut, sex with strangers, multiple sexual partners, and testing positive for STIs (Berenson et al., 2001). Although these findings on the relationship between CVE and sexual behaviors are very informative, they are limited by several factors such as possible selection bias and inadequate attention to how race/ethnicity and gender may moderate these relationships.

Contributions of the Current Study

This study examined the relationship between CVE and sexual behaviors in a nationally representative sample and examined whether there were gender or racial/ethnic differences in these relationships. By doing so, we address several important gaps in the extant literature. For instance, prior studies examining the relationship between CVE and youth sexual behaviors either have been based on small community populations, in which samples ranged from 120 to 602 participants (Albus et al., 2004; Voisin, 2003, 2005), or have been limited to clinical samples (e.g., detained youth or hospital samples; Berenson et al., 2001; Stiffman et al., 1995; Voisin et al., 2007, 2008). This has limited generalizability to the overall U.S. population. In addition to potential sample bias with prior studies, the majority of prior research has focused on adolescence; thus, the relationships between CVE and sexual behaviors during young adulthood are largely unknown. STI rates are generally highest among individuals aged 20 to 24 years old (CDC, 2008), indicating that decreasing the prevalence of sexual risk behaviors during the transition from adolescence to adulthood is an important public health concern. At present, only one study has examined the impact of CVE on sexual risk behaviors in young adulthood (Brady, 2006). Although this study did find a significant correlation between CVE and total number of sexual partners, the sample was limited and consisted of 319 predominantly White (84%) participants aged 18 to 20 years old who were concurrently enrolled in college. Finally, a review of 35 studies examining sexual behaviors in adolescence indicated that the effects of individual, family, and school risk factors varied depending on gender and race/ethnicity; however, gender and racial/ethnic differences in the effects of community factors, including exposure to community violence, were not examined (Zimmer-Gembeck & Helfand, 2008). Understanding if gender and racial/ethnic differences exist with regards to how CVE is related to sexual behaviors is important to informing the design of tailored public health STI prevention initiatives.

Conceptual Underpinnings

Together social disorganization theory (Gottfredson, 2006; Gottfredson & Hirschi, 1990) and social ecological perspectives (Bronfenbrenner, 1979; Bronfenbrenner & Ceci, 1994) provide the conceptual underpinnings as to why CVE and sexual behaviors may be interrelated and how factors such as gender and race/ethnicity may matter with regards to this relationship. Social disorganization theory posits that in high-violence communities, there is a combination of marginal economic status, ethnic heterogeneity, and limited residential mobility, which results in lower community control and monitoring of youth, which can lead to higher rates of a broad range of problem behaviors, including sexual risk behaviors (Dembo, Belenko, Childs, Greenbaum, & Wareham, 2010; Voisin et al., 2011). In addition, Bronfenbrenner's social ecological model in brief posits that individual, relationship, community, and societal factors may all exert influence on the relationship between CVE and sexual behaviors (Bronfenbrenner, 1979; Bronfenbrenner & Ceci, 1994). Consistent with this framework, the risk correlates of CVE may not be equal for all individuals, and as such, factors like gender and race/ethnicity potentially matter. For instance, men, women, racial majorities, and racial minorities may each occupy various ecological niches that may predispose them to various social and societal opportunities or hardships that may influence their exposure to CVE and its sequelae.

Study Aims

Given the existing critical gaps in the current literature, we examined relationships between CVE and sexual behaviors among a national sample of young adults aged 18 to 27 years old. This study further extends previous work on relationships between CVE and sexual behaviors by explicitly testing whether the risk effects of CVE are similar for men and women and for young adults from different ethnic/minority groups. To determine the independent effect for CVE on sexual behaviors, we controlled for age, family structure, and as a proxy for socioeconomic status, parental education. We controlled for these potential confounders because prior research has already documented that these constructs are related to CVE and sexual behaviors (Cavazos-Rehg et al., 2009; Cohen, Farley, Taylor, Martin, & Schuster, 2002; Crosby et al., 2006). Therefore, the aim of this study was to examine the relationship between exposure to community violence and sexual behaviors after controlling for age, family structure, and parental education. In addition, our study extends previous work on relationships between CVE and sexual behaviors by explicitly testing whether the risk effects of CVE are similar for men and women and for young adults from different ethnic/minority groups.

METHODS

Sample

To capture the period of young adulthood, which was the primary developmental period of this study, we utilized Wave III of the *National Longitudinal Study of Adolescent Health.* Wave I data included a nationally representative sample of adolescents in Grades 7 through 12 in the United States during the 1994–1995 school year. Wave I data also included an in-home interview. The majority of the youth were interviewed again in their homes 1 year later (1996, Wave II). The Wave III (2001–2002) in-home interview was conducted on 15,170 of the original Wave I respondents, when they were aged 18 to 28 years old. Therefore, the analytic sample for this study was a subsample of young adults aged 18 to 27 years old who participated in Wave III of the *National Longitudinal Study of Adolescent Health* (Add Health; Harris et al., 2009). Participants were included in the analyses if they self-identified as Hispanic/Latino, White, or African American and as unmarried. We excluded participants identifying as gay or bisexual from the analyses given the small number of participants in this category and the fact that these persons given their sexual minority status may occupy certain ecological niches that would warrant a different analytic consideration.

Of the 15,170 participants in Wave III, 9,900 (65.3%) met the study criteria. In the Add Health study, only participants who reported sexual debut (85.7% of the qualified sample; N = 8,489) were asked questions about age of onset of sexual debut and number of lifetime and past-year partners. Finally, because we used listwise deletion to account for missing data in study predictors, 763 (7.7%) individuals were excluded from the analyses because of incomplete data on parental education, family structure, and/or CVE. The final possible sample size for analysis was 7,726. The majority of these participants (84.1%) were aged 20 to 24 years old, and the mean age was 22.24 years (SD = 1.70) at the time when Wave III data were collected. No internal review board approval was needed for this study because it

was based on secondary data analyses from a publically available data set (Add Health; Harris et al., 2009).

Data Collection

Data were collected on laptop computers. For sensitive questions, respondents wore headphones, listened to prerecorded questions, and entered their answers directly into the computer. This approach has been shown to reduce social desirability responses and potential problems associated with illiteracy (Turner et al., 1998). Information on family structure and parental education was based on data from the Wave I interview because this wave had fewer missing values for these variables. In addition, these variables were relatively stable across study waves and there was no justification to suggest that their responses changed between Wave I and Wave III. All other factors such as age, gender, race/ethnicity, CVE, and sexual behaviors were assessed at Wave III. In summary, our hypothesized predictor (CVE) and all outcome measures (sexual debut history, number of sexual partners in the previous 12 months, and total number of sexual partners) were assessed at Wave III. Notably, we were unable to assess CVE prospectively given that this variable was not evaluated consistently across waves.

Measures

Independent Variable

Community violence exposure.: Participants indicated whether they had been exposed to seven violent lifetime events either as witnesses or victims (seen someone shoot or stab another person, had someone pull a gun on them, had someone pull a knife on them, been shot, been stabbed, been beaten up without anything stolen, and been beaten up and robbed). Participants who had been exposed to any of the seven violent events were coded as 1 = youth exposed to CVE, and participants who had not been exposed to any of the events were coded as 0 = unexposed youth.

Dependent Variables—Sexual Behaviors

Early sexual debut.: Participants reported how old they were the first time they had vaginal intercourse. Valid data were available for 99.4% (N = 7,682) of participants. In response to questions on sexual history, sexual debut ranged from 10 to 25 years old. A dichotomous measure was created with 1 = participants who had sex at or prior to age 14 and 0 = sexual debut at age 15 years or older, based on criteria commonly used in previous studies to define what is considered early sexual debut for American youth (Baumgartner, Geary, Tucker, & Wedderburn, 2009).

Number of past-year sexual partners.: Participants also reported the number of partners with whom they had had vaginal intercourse in the previous 12 months. Valid data were available for 98.9% (N = 7,644) of participants Responses ranged from 0 to 50 partners (M = 1.84, SD = 2.28) and were log-transformed to adjust for skewness (adjusted skewness = .87; M = 0.89, SD = 0.50; range = 0–3.93).

Total number of sexual partners.: Participants reported the number of partners with whom they had ever had vaginal intercourse. Valid data were available for 98.6% (N = 7,614) of participants. Responses ranged from 1 to 50 partners (M = 6.52, SD = 7.63). Responses were log-transformed to adjust for skewness (adjusted skewness = .24; M = 1.40, SD = 0.96; range = 0–3.91).

Covariates

Age.: Ages were calculated by subtracting participants' birth date from the interview date.

Gender.: Gender was assessed by one item: "What is your gender?"

Race/ethnicity.: Race/ethnicity was assessed by two items—namely, "Are you of Hispanic or Latino origin?" and "What is your race?" Response categories for the latter item were White, Black/African American, American Indian/Native American, and Asian or Pacific Islander. If participants provided more than one response to their racial background, they indicated one category that best described their race. Only Hispanic, Non-Hispanic White, and Non-Hispanic African American participants were included in the analysis of the current study.

Family structure.: Family structure was assessed using participants' reports of household roster information and was classified as 1 = two biological parents and 0 = others.

Parental education.: Participants reported the highest level of education achieved by their residential mother and residential father. Responses ranged from 0 = never went to school to 9 = professional training beyond a 4-year college or university. Parental education was averaged across both mothers and fathers for youth who lived with two parents (M = 5.51, SD = 2.20; range = 0–9).

Data Analyses

Analyses for the present study were conducted using the Statistical Package for the Social Sciences Version 18.0. Logistic regression was used for analysis of early sexual debut, as the outcome variable was dichotomous. Multiple linear regression analysis was used for continuous measures of the number of total sexual partners and the number of past-year sexual partners. All models included age, family structure, and parental education as covariates. Main effects of gender, race/ethnicity, and CVE on measures of sexual behaviors were first examined; interactions between gender and race/ethnicity with CVE were then explored. In each case where significant interaction effects were detected, analyses were repeated by gender and/or by race/ethnicity. For analytical purposes, dummy variables were created for African Americans and Hispanic/Latinos using Caucasians as the comparison group.

RESULTS

Descriptive Statistics

Table 1 presents descriptive statistics for all study variables. Regarding the main study constructs, men reported higher rates of CVE and higher rates/levels of sexual risk behaviors compared with women. In terms of racial/ethnic differences, African Americans reported the highest and Caucasians reported the lowest rates of CVE. Additionally, rates/levels of sexual risk behaviors were highest among African Americans, while prevalence of early sexual debut was lowest among Caucasians and number of past-year and total sexual partners was lowest among Hispanic/Latinos.

Main Effects Models

Table 2 presents results from regression analyses examining main effects of gender, race/ethnicity, and CVE on measures of sexual behaviors controlling for age, family structure, and parental education. Age was positively correlated with a greater number of lifetime sexual partners. More specifically, older youth reported a higher number of lifetime sexual partners. However, age was inversely associated with number of past-year partners, such that younger youth reported more partners within the last year. In addition, persons who were older were less likely to report to have had experienced their first sexual debut at or prior to age 14. Young-adult participants who lived with both biological parents during adolescence consistently exhibited significantly lower levels of sexual risk behaviors (i.e., early sexual debut, a higher number of past-year and lifetime sexual partners). Higher levels of parental education were associated with a significantly lower risk for early sexual debut.

Gender differences in early sexual debut were not significant. However, men were more likely than women to report a greater number of lifetime and past-year sexual partners. Racial/ethnic differences across all sexual behavior measures were found. Specifically, African Americans had higher rates of early sexual debut and greater numbers of past-year sexual partners compared with Caucasians, while Hispanic/Latinos reported fewer lifetime sexual partners than Caucasians did.

CVE was correlated with all sexual behaviors assessed. Notably, the odds of early sexual debut were more than 2 times greater for youth exposed to CVE than for peers reporting no such exposures. In addition, youth exposed to CVE were more likely than unexposed youth to have a greater number of lifetime and past-year sexual partners.

Interactions Between Gender and Race/Ethnicity With CVE

There were significant interaction effects between gender and CVE for all three sexual behaviors: early sexual début (b = .46, SE = .20, $p < .05$), number of total sexual partners (b = .22, SE = .08, $p < .01$), and number of past-year partners (b = .11 SE = .04, $p < .01$). Follow-up analyses indicated that CVE had a stronger effect among men than among women for all three outcomes, such that men exposed to community violence reported greater sexual risk behaviors relative to their female peers. More specifically, men exposed to community violence were more likely than their female counterparts to report to have had experienced sexual debut at or prior to age 14 years (adjusted odds ratio [AOR] = 2.24, $p < .001$, men;

AOR = 1.50, $p < .05$, women). Men exposed to community violence relative to their female peers were also more likely to report a higher number of lifetime sexual partners ($\beta = .14$, $p < .001$, men; $\beta = .05$, $p < .01$, women) and a higher number of past-year sexual partners ($\beta = .16$, $p < .001$, men; $\beta = .08$, $p < .001$, women).

Model tests also indicated significant interactions between race/ethnicity and CVE for early sexual debut ($\Delta\chi^2 = 6.01$, $\Delta df = 2$, $p < .05$) and the number of total sexual partners ($F_{change} = 4.05$, $\Delta df = 2$, $p < .05$). Follow-up analyses indicated that CVE was not as strongly associated with early sexual debut for African Americans (AOR = 1.47, $p < .01$) as it was for Caucasians (AOR = 2.86, $p < .001$) or Hispanic/Latinos (early sexual début, AOR = 1.92, $p < .001$). The relationship between CVE and the number of total sexual partners was also weaker among African Americans ($\beta = .07$, $p < .001$) compared with Caucasians ($\beta = .13$, $p < .001$) or Hispanic/Latinos ($\beta = .15$, $p < .001$), although the comparison between African Americans and Hispanic/Latinos was not statistically significant ($p > .10$). None of the comparisons between Caucasians and Hispanic/Latinos showed statistical significance.

DISCUSSION

This study makes a significant methodological contribution by being the first to examine whether CVE is related to sexual behaviors among a sample of young adults using a large, nationally representative sample. Even after controlling for potential confounders such as age, gender, race/ethnicity, parental education levels, and family structure, participants who reported any CVE versus participants reporting no such exposures were more likely to have their first sexual experience at or before age 14 years and to have a higher number of sexual partners during the previous 12 months and a higher total number of lifetime sexual partners. Our findings extend prior research reporting associations between CVE and sexual risk behaviors in samples of adolescents (Albus et al., 2004; Berenson et al., 2001; Brady, 2006; Voisin, 2003, 2005; Voisin et al., 2007, 2008) and are consistent with the one prior study of young adults examining associations between CVE and sexual risk behaviors among a small sample of predominantly White college students aged 18 to 20 years old (Brady, 2006).

In addition to being the first nationally representative study examining the relationships between CVE and sexual behaviors among young adults, a further major contribution of the present study is that we specifically tested whether the relationship between CVE and sexual behaviors differed for men and women or for youth with different racial/ethnic backgrounds. Findings indicated that CVE was more strongly associated with sexual behaviors for men compared with women. Several reasons may account for this finding. There is ample evidence that men report higher rates of sexual risk behaviors and greater exposures to community violence than do women (Margolin & Gordis, 2000; Voisin et al., 2011; Voisin & Neilands, 2010). At the same time, traditional gender norms and social scripts promote more conservative sexual behaviors for women than they do for men (Marston & King, 2006). Thus, one explanation of these results is that sexual behavior among women may be constrained by broader social forces (e.g., gender norms and social scripts) and might therefore be less responsive to variations in more proximal environments. In addition, there is evidence that men are more likely to respond to CVE with more active responses whereas women are more likely to respond with more isolating reactions (Voisin, Bird, Hardesty, &

Cheng, 2010), which may translate into lower levels of sexual activity. Future research assessing coping styles as a potential mediator of the observed gender differences between CVE and sexual behaviors would need to be explored. In addition, there is some evidence that more women than men may report other types of negative sequelae in response to violence exposures (e.g., depression) that were not assessed in this study. Future research might explore whether depression or other potential gender-specific factors may moderate the relationship between exposure to community violence and sexual behaviors. Additional research is needed to illuminate protective factors that provide resiliency for youth who are confronted by high levels of exposure to community violence (e.g., high intelligence, problem-solving skills, social support, and future orientation).

We also found evidence of racial/ethnic differences in the relationship between CVE and sexual behaviors. Specifically, African American young adults reported higher rates of CVE but less negative sexual sequelae associated with CVE compared with Caucasians. These findings may reflect some support for the desensitization hypothesis, whereby individuals who live in environments with repeated exposure to violence may learn to adapt over time, leading to attenuation of future negative responses to CVE (Farrell & Bruce, 1997; Fitzpatrick & Boldizar, 1993; Gaylord-Harden, Cunningham, & Zelencik, 2011; Mrug, Loosier, & Windle, 2010; Ng-Mak, Salzinger, Feldman, & Stueve, 2004; White, Bruce, Farrell, & Kliewer, 1998), although evidence has been mixed (Lynch, 2003; McCart et al., 2007; Mrug & Windle, 2009). A recent review and meta-analysis showed that the relationship between CVE and negative behaviors was weaker in studies where samples consisted of predominantly African American youth (Fowler, Tompsett, Braciszewski, Jacques-Tiura, & Baltes, 2009), consistent with the pattern of racial/ethnic differences observed in the present study for sexual risk behaviors.

Interestingly, the Hispanic/Latino young adults in our sample were also exposed to higher rates of CVE than were Caucasians, yet the relationship between CVE and sexual behaviors did not differ between these two racial/ethnic groups. We note that the Hispanic/Latino population in the Add Health sample is very diverse, with participants from Mexican, Puerto Rican, Central/South American, Cuban, and Caribbean backgrounds. In addition, Hispanic/Latino participants in the Add Health study are composed of both non-immigrants and different generations of immigrants, which may be related to differences in acculturation. Thus, it is possible that these variations *within* the Hispanic/Latino population, combined with the relatively smaller sample size of these participants, may have reduced statistical power to detect significant differences in comparison with Caucasian participants. On the other hand, this finding may indicate that there are important intervening variables that were not assessed in this study, which could account for this pattern of findings. For instance, cultural differences between African American and Hispanic/Latino minorities might account for the different patterns of effects of CVE on sexual risk behaviors. Future research would need to clarify these findings and test whether cultural factors may mediate the relationship between CVE and sexual behaviors.

Limitations and Public Health Implications

There are several limitations that require further consideration. Measures used to assess CVE are not consistent across studies (Margolin & Gordis, 2000). Although we used a measure that has been used in prior studies to assess CVE, this measure was not used consistently across study waves, which prohibited us from assessing the relationship between CVE and sexual behaviors longitudinally. Although our cross-sectional data cannot distinguish temporal orderings, we note that prior longitudinal studies in adolescence using community constructs were associated with increases in sexual risk behaviors. Specifically, parental perceptions of neighborhood drug use and crime predicted adolescent sexual risk behaviors 18 months later (Chen, Thompson, & Morrison-Beedy, 2010), while a separate study showed that adolescent perceptions of neighborhood safety predicted onset of sexual intercourse for men but not for women across a 1-year period (Upchurch, Aneshensel, Sucoff, & Levy-Storms, 1999). Nevertheless, prospective research in young-adult samples is needed to definitively address this limitation, although longitudinal research with samples of White and Latino youth ($N = 302$) has also provided evidence that independent of age, gender, ethnicity, socioeconomic status, and previous levels of health risk behaviors, adolescent populations who have been victimized by community violence were more likely to report a higher number of sexual partners (Brady, Tschann, Pasch, Flores, & Ozer, 2008).

We also note that our sample was restricted to unmarried, heterosexual young adults who were sexually active. Thus, results may not generalize to sexual behaviors in other populations. Having sexual intercourse at or prior to the age of 14 years is widely associated with a greater STI prevalence (CDC, 2010). In addition, other proxies for sexual risk such as number of total sexual partners and past-year sexual partners are frequently used in research as sexual risk indicators (CDC, 2010). However, they may only approximate such STI risk especially if there has been reliable and effective condom use with sexual partners or if sexual partners have low-risk profiles (Spitalnick et al., 2006). In addition, we need further research to help us better illuminate the mechanisms whereby CVE is associated with sexual risk behaviors. For example, there is evidence that one pathway mediating the relationship between CVE and sexual risk behaviors in adolescence is poor parental monitoring (Voisin, Tan, Tack, Wade, & DiClemente, 2012). However, the social factors that may account for the relationship between CVE and sexual risk behaviors in young-adult populations have not yet been explored. Finally, as the present study is the first to indicate that the relationship between CVE and sexual behaviors varies across gender and race/ethnicity, additional research that confirms these findings in other samples is warranted.

Notwithstanding these limitations, our findings have important public health implications. Our findings suggest the need for systems that deal with the dual public health problems of CVE and sexual health to be less bifurcated. Sexual health education has traditionally been delineated to public health clinics and schools, while concerns relating to CVE have usually been assigned to law enforcement and mental health services. Greater interagency collaboration is therefore needed among systems of care to increase awareness of these intersecting public health concerns, to improve assessment of risk, and to develop multipronged intervention and prevention strategies (Voisin, 2007). Such approaches might provide important protective factors for young adults living in communities besieged by high

rates of CVE. Finally, although not assessed in this study, we know that programs that invest in after-school activities support the increase of high school graduation rates and job creation and are important to reducing the rates of CVE and high-risk sexual behaviors in under-resourced communities.

In summary, this study provides evidence for a robust relationship between exposure to community violence and sexual behaviors among a nationally representative sample of youth. These findings further corroborate that exposure to community violence and sexual risk behaviors are two intersecting public health concerns. Consequently, primary and secondary intervention programs should also provide tailored interventions based on gender and ethnicity given that these factors moderate the relationship between exposure to community violence and sexual risk behaviors.

REFERENCES

Albus KE, Weist MD, & Perez-Smith AM (2004). Associations between youth risk behavior and exposure to violence implications for the provision of mental health services in urban schools. Behavior Modification, 28, 548–564. doi:10.1177/0145445503259512 [PubMed: 15186515]

Baumgartner JN, Geary CW, Tucker H, & Wedder-burn M (2009). The influence of early sexual debut and sexual violence on adolescent pregnancy: A matched case-control study in Jamaica. International Perspectives of Sexual Reproductive Health, 35, 21–28. doi:10.1363/3502109

Berenson AB, Wiemann CM, & McCombs S (2001). Exposure to violence and associated health-risk behaviors among adolescent girls. Archives of Pediatrics and Adolescent Medicine, 155, 12380–12342. doi:10.1001/archpedi.155.11.1238

Brady SS (2006). Lifetime community violence exposure and health risk behavior among young adults in college. Journal of Adolescent Health, 39, 610–613. doi:10.1016/j.jadohealth.2006.03.007

Brady SS, Tschann JM, Pasch LA, Flores E, & Ozer EJ (2008). Violence involvement, substance use, and sexual activity among Mexican-American and European-American adolescents. Journal of Adolescent Health, 43, 285–295. doi:10.1016/j.jadohealth.2008.02.007

Bronfenbrenner U (1979). The ecology of human development: Experiments by nature and design. Cambridge, MA: Harvard University Press.

Bronfenbrenner U, & Ceci SJ (1994). Nature-nurture reconceptualized in developmental perspective: A bioecological model. Psychological Review, 101, 568–586. doi:10.1037/0033-295X.101.4.568 [PubMed: 7984707]

Cavazos-Rehg PA, Krauss MJ, Spitznagel EL, Schootman M, Bucholz KK, Peipert JF, & Bierut LJ (2009). Age of sexual debut among US adolescents. Contraception, 80, 158–162. doi:10.1016/j.contraception.2009.02.014 [PubMed: 19631791]

Centers for Disease Control and Prevention. (2008). Sexually transmitted disease surveillance, 2008. Retrieved from http://www.cdc.gov/std/stats08/surv2008-complete.pdf

Centers for Disease Control and Prevention. (2010). Web-Based Injury Statistics Query and Reporting System (WISQARS). Retrieved from http://www.cdc.gov/ncipc/wisqars

Chen ACC, Thompson EA, & Morrison-Beedy D (2010). Multi-system influences on adolescent risky sexual behavior. Research in Nursing & Health, 33, 512–527. doi:10.1002/nur.20409 [PubMed: 21053385]

Cohen D, Farley T, Taylor S, Martin D, & Schuster M (2002). When and where do youths have sex? The potential role of adult supervision. Pediatrics, 110, e66. Retrieved from http://pediatrics.aappublications.org/content/110/6/e66.long [PubMed: 12456933]

Crosby R, Salazar LF, DiClemente RJ, Voisin D, Yarber WL, & Caliendo AM (2006). Family influences and biologically confirmed sexually transmitted infections among detained adolescents. American Journal of Orthopsychiatry, 76, 389–394. doi:10.1037/0002-9432.76.3.389

Dembo R, Belenko S, Childs K, Greenbaum PE, & Wareham J (2010). Gender differences in drug use, sexually transmitted diseases, and risky sexual behavior among arrested youths. Journal of Child

Adolescent Substance Abuse, 19, 424–446. doi:10.1080/1067828X.2010.515886 [PubMed: 21221415]

Farrell AD, & Bruce SE (1997). Impact of exposure to community violence on violent behavior and emotional distress among urban adolescents. Journal of Clinical Child Psychology, 26, 2–14. doi:10.1207/s15374424jccp2601_1 [PubMed: 9118172]

Federal Bureau of Investigation. (2006). Crimes in the United States, 2006. Retrieved from http://www2.fbi.gov/ucr/cius2006/

Fitzpatrick KM, & Boldizar JP (1993). The prevalence and consequences of exposure to violence among African-American youth. Journal of the American Academy of Child & Adolescent Psychiatry, 32, 424–430. doi:10.1097/00004583-199303000-00026 [PubMed: 8444774]

Fowler PJ, Tompsett CJ, Braciszewski JM, Jacques-Tiura AJ, & Baltes BB (2009). Community violence: A meta-analysis on the effect of exposure and mental health outcomes of children and adolescents. Development & Psychopathology, 21, 227–259. doi:10.1017/S0954579409000145 [PubMed: 19144232]

Gaylord-Harden NK, Cunningham JA, & Zelencik B (2011). Effects of exposure to community violence on internalizing symptoms: Does desensitization to violence occur in African American youth? Journal of Abnormal Child Psychology, 39, 711–719. doi:10.1007/s10802-011-9510-x [PubMed: 21505848]

Gottfredson MR (2006). The empirical status of control theory in criminology. In Cullen FT, Wright JP, & Blevins KR (Eds.), Advances in criminological theory: Vol. 15. Taking stock: The status of criminological theory (pp. 77–100). New Brunswick, NJ: Transaction Publishers.

Gottfredson M, & Hirschi T (1990). A general theory of crime. Stanford, CA: Stanford University Press.

Harris KM, Halpern CT, Whitsel E, Hussey J, Tabor J, Entzel P, & Udry JR (2009). The National Longitudinal Study of Adolescent to Adult Health: Research design. Retrieved from http://www.cpc.unc.edu/projects/addhealth/design

Krug EG, Dahlberg TT, Mercy JA, Zwi AB, & Lozano R (2002). World report on violence and health (Vol. 866). Geneva, Switzerland: World Health Organization. Retrieved from http://www.who.int/violence_injury_prevention/violence/world_report/en/full_en.pdf

Lynch M (2003). Consequences of children's exposure to community violence. Clinical Child & Family Psychology Review, 6, 265–274. doi:10.1023/B:CCFP.0000006293.77143.e1 [PubMed: 14719638]

Margolin G, & Gordis EB (2000). The effects of family and community violence on children. Annual Review of Psychology, 51, 445–479. doi:10.1146/annurev.psych.51.1.445

Marston C, & King E (2006). Factors that shape young people's sexual behaviour: A systematic review. Lancet, 368, 1581–1586. doi:10.1016/S0140-6736(06)69662-1 [PubMed: 17084758]

McCart MR, Smith DW, Saunders BE, Kilpatrick DG, Resnick H, & Ruggiero KJ (2007). Do urban adolescents become desensitized to community violence? Data from a national survey. American Journal of Orthopsychiatry, 77, 434–442. doi:10.1037/0002-9432.77.3.434

Mrug S, Loosier PS, & Windle M (2010). Violence exposure across multiple contexts: Individual and joint effects on adjustment. American Journal of Orthopsychiatry, 78, 70–84. doi:10.1037/0002-9432.78.1.70

Mrug S, & Windle M (2009). Bidirectional influences of violence exposure and adjustment in early adolescence: Externalizing behaviors and school connectedness. Journal of Abnormal Child Psychology, 37, 611–623. doi:10.1177/0272431608324473 [PubMed: 19199024]

Ng-Mak DS, Salzinger S, Feldman RS, & Stueve C (2004). Pathologic adaptation to community violence among inner-city youth. American Journal of Orthopsychiatry, 74, 196–208. doi:10.1037/0002-9432.74.2.196

Spitalnick J, DiClemente R, Wingood G, Crosby R, Milhausen R, Sales J, … Younge S (2006). Brief report: Sexual sensation seeking and its relationship to risky sexual behaviors among African-American adolescent females. Journal of Adolescence, 30, 165–173. doi:10.1016/j.adolescence.2006.10.002 [PubMed: 17140653]

Stiffman AR, Dore P, Cunningham RM, & Earls F (1995). Person and environment in HIV risk behavior change between adolescence and young adulthood. Health Education Quarterly, 22, 211–226. doi:10.1177/109019819502200209 [PubMed: 7622389]

Turner CF, Ku L, Rogers SM, Lindberg LD, Pleck JH, & Sonenstein FL (1998). Adolescent sexual behavior, drug use, and violence: Increased reporting with computer survey technology. Science, 280, 867–873. doi:10.1126/science.280.5365.867 [PubMed: 9572724]

Upchurch DM, Aneshensel CS, Sucoff CA, & Levy-Storms L (1999). Neighborhood and family contexts of adolescent sexual activity. Journal of Marriage & Family, 61, 920–933. doi:10.2307/354013

Voisin DR (2003). Victims of community violence and HIV sexual risk behaviors among African American adolescent males. Journal of HIV/AIDS Prevention & Education for Adolescents & Children, 5, 87–110. doi:10.1300/J129v05n03_05

Voisin DR (2005). The relationship between violence exposure and HIV sexual risk behaviors: Does gender matter? American Journal of Orthopsychiatry, 75, 497–506. doi:10.1037/0002-9432.75.4.497

Voisin DR (2007). The effects of family and community violence exposure among youth: Recommendations for practice and policy. Journal of Social Work Education, 43, 51–66. doi:10.5175/JSWE.2007.200400473

Voisin D, Bird J, Hardesty M, & Cheng SS (2010). African American youth living and coping with exposure to community violence. Journal of Interpersonal Violence, 26, 2483–2498. doi:10.1177/0886260510383029 [PubMed: 20956443]

Voisin DR, DiClemente R, Salazar L, Crosby R, Yarber W, & Staples-Horne M (2007). Community violence exposure and health-risk outcomes among detained adolescents. American Journal of Orthopsychiatry, 77, 506–513. doi:10.1037/0002-9432.77.4.506

Voisin DR, Jenkins EJ, & Takahashi L (2011). Toward a conceptual model linking community violence exposure to HIV-related risk behaviors among adolescents: Directions for research. Journal of Adolescent Health, 49, 230–236. doi:10.1016/j.jadohealth.2011.01.002

Voisin DR, & Neilands TB (2010). Community violence and health risk factors among adolescents on Chicago's Southside: Does gender matter? Journal of Adolescent Health, 46, 600–602. doi:10.1016/j.jadohealth.2009.11.213

Voisin DR, Neilands TB, Salazar LF, Crosby R, & DiClemente RJ (2008). Pathways to drug and sexual risk behaviors among detained adolescents. Social Work Research, 32, 147–157. doi:10.1093/swr/32.3.147 [PubMed: 20228887]

Voisin DR, Tan K, Tack AC, Wade D, & DiClemente R (2012). Examining parental monitoring as a pathway from community violence exposure to drug use, risky sex, and recidivism among detained youth. Journal of Social Service Research, 38, 699–711. doi:10.1080/01488376.2012.716020

Weinstock H, Berman S, & Cates W (2004). Sexually transmitted diseases among American youth: Incidence and prevalence estimates, 2000. Perspectives on Sexual & Reproductive Health, 36, 6–10. doi:10.1363/3600604 [PubMed: 14982671]

White KS, Bruce SE, Farrell AD, & Kliewer W (1998). Impact of exposure to community violence on anxiety: A longitudinal study of family social support as a protective factor for urban children. Journal of Child & Family Studies, 7, 187–203. doi:10.1023/A:1022943216319

Zimmer-Gembeck MJ, & Helfand M (2008). Ten years of longitudinal research on US adolescent sexual behavior: Developmental correlates of sexual intercourse, and the importance of age, gender and ethnic background. Developmental Review, 28, 153–224. doi:10.1016/j.dr.2007.06.001

TABLE 1.

Descriptive Statistics by Gender and Race/Ethnicity

	Full Sample	Men	Women	Caucasians	African Americans	Hispanics
Demographics and Prevalence of Violence Exposure						
Total *N*	7,726	4,025	3,701	4,455	2,048	1,223
Age (Mean/*SD*)	22.24/1.70	22.36/1.69	22.10/1.70	22.15/1.69	22.24/1.73	22.57/1.67
Parental Education (Mean/*SD*)	5.51/2.20	5.56/2.19	5.45/2.21	5.79/2.02	5.73/2.15	4.09/2.38
% Two Biological Parents	54.2%	54.9%	53.5%	60.9%	37.5%	58.1%
% Exposed to Violence	12.2%	18.1%	5.9%	9.3%	17.4%	14.2%
Prevalence (%) or Mean/SD of Sexual Behaviors						
Early Sexual Debut (*N* = 7,682)	17.0%	18.0%	16.0%	13.8%	24.2%	16.7%
Total Number of Sexual Partners (*N* = 7,614)	6.52/7.63	7.60/8.99	5.34/5.58	6.35/7.25	7.31/8.65	5.82/7.06
Past-Year Sexual Partners (*N* = 7,644)	1.84/2.28	2.12/2.71	1.54/1.65	1.76/2.20	2.13/2.75	1.67/1.61

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TABLE 2.

Models Examining Main Effects of Gender, Race/Ethnicity, and Community Violence Exposure on Measures of Sexual Behaviors

	Early Sexual Debut		Number of Lifetime Sexual Partners		Number of Past-Year Sexual Partners	
	b (SE)	AOR	b (SE)	β	b (SE)	β
Age	−.07 (.02)***	0.94	.09 (.01)***	.17	−.01 (.00)**	−.04
FS	−.57 (.06)***	0.57	−.14 (.02)***	−.07	−.03 (.01)**	−.03
PE	−.06 (.02)***	0.94	.00 (.01)	.01	.01 (.00)	.02
Male	.10 (.06)	1.11	.14 (.02)***	.07	.11 (.01)***	.11
AA	.52 (.07)***	1.68	.04 (.03)	.02	.08 (.01)***	.07
Hispanic	.09 (.09)	1.10	−.18 (.03)***	−.07	−.01 (.02)	−.00
CVE	.72 (.08)***	2.04	.34 (.03)***	.11	.21 (.02)***	.14

Note.

** $p < .01$.

*** $p < .001$. AOR = adjusted odds ratio; FS = family structure (1 = two biological parents, 0 = other); PE parental education; AA = Non-Hispanic African American; CVE = community violence exposure.

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