The Mediating Role of Partner Communication Skills on HIV/STD–Associated Risk Behaviors in Young African American Females With a History of Sexual Violence

Jessica McDermott Sales, PhD; Laura F. Salazar, PhD; Gina M. Wingood, ScD, MPH; Ralph J. DiClemente, PhD; Eve Rose, MSPH; Richard A. Crosby, PhD

Objectives: To examine the prevalence of sexual violence among young African American females and to explore the mediating role that partner communication plays on human immunodeficiency virus (HIV)/sexually transmitted disease–associated risk behaviors among youth with a history of sexual violence relative to those without.

Design: Only data from baseline, before randomization, were used for this analysis.

Setting: A clinic-based sample of young females enrolled in a randomized trial of an HIV-prevention program in Atlanta, Georgia, from March 2002 to August 2004.

Participants: African American females aged 15 to 21 years who reported sexual activity in the previous 60 days. Of 1558 screened, 874 females were eligible and 82% (n=715) participated at baseline.

Outcome Measures: History of sexual violence as well as (1) sexual partner communication skills, (2) current sexual behaviors, and (3) psychological well-being.

Results: Lifetime prevalence of sexual violence was 26%. Communication skills partially mediated the relationship between sexual violence and psychological well-being and sexual behavior outcomes.

Conclusions: Given the lifetime prevalence of sexual violence and its adverse sexual, psychological, and relational sequelae, it is paramount that effective interventions are developed. Based on our findings, improving partner communications skills is one particularly important area for HIV/sexually transmitted disease risk-reduction interventions for youths with a history of sexual violence.


Nonconsensual sex that occurs during childhood or adolescence is a serious concern for practitioners and policymakers alike. Accumulating empirical evidence suggests that the effects of nonconsensual sex against females (sexual violence) experienced during the particularly vulnerable periods of childhood and adolescence can be pronounced and enduring. One consequence of experiencing sexual violence during this critical developmental period is its association with human immunodeficiency virus (HIV) and sexually transmitted disease (STD)—associated risk behaviors. This association is especially timely given the growing HIV epidemic among specific subgroups, such as African American women.

Retrospective studies among adult women have shown that experiencing sexual violence during adolescence has been associated with engaging in high-risk sexual practices in adulthood. Moreover, African American women who have experienced sexual violence as children have an increased risk for having an abortion, being abused again as an adult, contracting an STD, having more than 2 lifetime STDs, having early willing sex, and having a greater number of lifetime sexual partners. Although limited, the data examining these relationships in adolescent girls mimic the findings found in adult women.

Taken together, these studies suggest that acquiring HIV or an STD may occur through forced intercourse with an infected partner or may be a more peripheral consequence of sexual violence, in which, as suggested by the theory of gender and power, sexual violence disempowers women to negotiate safer sexual practices and places them at increased risk for acquiring an STD. This peripheral path through partner communication has been explored in the adult literature, but to our knowledge, little empirical data are available that have examined the indirect association between sexual violence and sexual risk practices.
through partner communication among young females. One study examined one part of this pathway and found that sexual violence was associated with a greater fear of consequences from negotiating condom use among African American adolescent females. Thus, to address gaps in the literature regarding sexual violence and young African American females, this study examined the lifetime prevalence of sexual violence in this group and the mediating role of partner communication between sexual violence and psychological well-being and HIV/STD–associated sexual risk behaviors.

**METHODS**

**SETTING**

Participants in this study were part of a larger study evaluating a sexual risk reduction intervention for young African American females. The analyses reported in this article are based on data from the baseline assessment. From March 2002 through August 2004, recruiters screened self-identified young African American females seeking reproductive and sexual health services at 3 local teenager-oriented community health agencies. Eligibility criteria included being African American, female, 15 to 21 years of age, and sexually active (reporting vaginal intercourse in the previous 60 days). The Emory University institutional review board approved the study protocol before implementation. Of 1558 screened, 874 females met eligibility criteria. Of those who met eligibility criteria, 82% (n=715) agreed to participate, provided written informed consent, and completed a baseline assessment.

**PARTICIPANTS**

The mean (SD) age of the participants was 17.9 (1.7) years. Most (63.3%) were full-time students; the remaining 34.7% had already graduated. Most participants had completed 10th or 11th grade (48.9%), while 26.2% had completed high school, which represents appropriate levels of education for their age. Most participants (83.6%) reported being in a current relationship (mean [SD] length of relationship, 15.2 [15.1] months).

**PROCEDURES**

Data collection consisted of a 40-minute survey administered via audio computer-assisted self-interviewing technology. Questions on the baseline survey pertained to several domains of personal information, including demographics, sexual history, attitudes and outcome expectancies, psychosocial variables, HIV/STD knowledge, and peer norms. The young females were compensated $50 for their participation.

**MEASURES**

**History of Sexual Violence**

History of sexual violence was conceptualized as an index comprising 2 severe forms of abuse—forced vaginal intercourse or forced anal intercourse—and was assessed by asking 2 questions: “Has anyone ever forced you to have vaginal sex when you didn’t want to?” and “Has anyone ever forced you to have anal sex when you didn’t want to?” Response choices were yes (1) and no (0). The conceptualization of sexual violence used in this study is rather limited in scope, including only severe sexual violence (ie, forced intercourse) and not other forms of sexual violence, such as digital penetration or fondling.

**Sociodemographic Measures**

Highest grade completed in school was assessed by a single question, “What was the last grade that you completed in school?” Receiving federal assistance for living expenses was assessed by 4 yes-or-no questions. Responses to each question were summed to create an index of family aid. Neighborhood quality was assessed by asking participants 3 questions about the physical condition of their neighborhood. Responses to all 3 yes-or-no questions were summed to create an index of neighborhood quality.

**Psychological Well-being**

**Depressive Symptomatology.** Depressive symptoms were assessed with the 8-item Center for Epidemiological Studies-Depression scale. This scale assesses presence of depressive symptoms in the past 7 days and has been shown to be a valid measure of depression in diverse populations, including African American individuals. The Cronbach α, a measure of internal consistency of the scale, was 0.89.

**Perceived Interpersonal Stress.** We used 13 items modified from the African-American Women’s Stress Scale to measure perceived interpersonal stress. These questions measure the amount of stress an individual feels in various interpersonal relationships. The Cronbach α for the selected scale items was 0.85.

**Self-esteem.** The Rosenberg Self-Esteem Scale, a 10-item scale, was used to measure global self-esteem. Possible scores range from 10 to 40, with higher scores indicating higher levels of self-esteem. This scale has been widely used in diverse samples, including African American adolescent females, and has demonstrated satisfactory validity and reliability. The Cronbach α for the scale was 0.85.

**Partner Communication Measures**

**Fear of Consequences of Condom Negotiation.** To assess fear of consequences of condom negotiation with a sexual partner, we used a 7-item scale. The stem for all items was “I have been worried that if I talked about using condoms, my boyfriend or sex partner would . . . .” The 7 consequences were “ignore my request,” “threaten to hit me,” “threaten to leave me,” “swear at me or call me ugly names,” “hit, push or kick me,” “leave me,” and “go out with other girls.” The Cronbach α for the scale was 0.84.

**Sexual Communication Self-efficacy.** A 6-item scale was used to assess sexual communication self-efficacy. Sample items included “With a sex partner, how hard is it for you to ask how many sex partners he has had?” and “With a sex partner, how hard is it for you to ask if he would use a condom?” The Cronbach α for the scale was 0.83.

**Condom Use**

Several measures of condom use were assessed. First, condom use during the last episode of vaginal intercourse with a steady partner was assessed. Condom use at last intercourse provides an assessment of recent condom use that may be less susceptible to recall bias. Participants were asked the question “Did you use a condom the last time you had vaginal sex with your boyfriend or steady partner?” Response choices were yes or no. Consistent condom use was assessed by asking participants the question “How many times did you have vaginal sex in the last 60 days?” Participants were then asked “How many of these times did you use a condom?” Participants who indicated using condoms during every episode of vaginal intercourse in the past...
60 days were defined as consistent condom users. Participants who indicated not using condoms during every episode of vaginal intercourse were defined as inconsistent condom users. Finally, we categorized the proportion of condom-protected sexual episodes into 2 categories: high (>50% of sexual episodes) and low (=50% of sexual episodes).

**STATISTICAL ANALYSIS**

Descriptive statistics were calculated to summarize sociodemographic variables and study variables. In addition, bivariate analyses were performed to examine differences between groups (sexual violence vs no sexual violence) on sociodemographic variables and study variables. Differences were assessed using t tests for continuous variables and χ² analyses for categorical variables. Our analytic plan followed the guidelines of Baron and Kenny. Because we were interested in determining whether HIV/STD–associated risk behaviors and negative psychological sequelae were directly or indirectly (ie, operating through disempowering women to communicate and negotiate safer sexual practices with sexual partners) related to sexual violence, we tested for significant direct associations between sexual violence and psychological outcomes and sexual behaviors and we tested for significant indirect associations through partner communication, respectively. Specifically, we conducted a series of regression equations. First, we conducted 2 separate linear regressions in which we regressed each partner communication variable on the sexual violence variable. Second, we conducted a series of regressions in which we regressed the psychological outcomes and the sexual behaviors and we tested for significant direct associations between sexual violence and psychological and sexual behavioral outcomes through the partner communication variables. (These regression results are available from J.M.S. on request.) The third set of regressions is presented in Table 1 and Table 2. Furthermore, using the Sobel test, we evaluated the significance of the indirect association between sexual violence and the psychological and sexual behavioral outcomes through the partner communication variables.

**RESULTS**

**DESCRIPTIVE ANALYSIS**

Lifetime prevalence of either form of sexual violence equaled 26%. Nonconsensual vaginal intercourse was most frequently reported (25%), but nonconsensual anal intercourse was also present in this sample (5%). Of the 26% of participants with a history of sexual violence, 21% experienced nonconsensual vaginal intercourse only, 1% experienced nonconsensual anal intercourse only, and 4% reported experiencing both. The mean (SD) age of first nonconsensual vaginal intercourse was 12.6 (4.3) years, and mean (SD) age of first nonconsensual anal intercourse was 14.3 (4.1) years. For both forms of abuse, 95% of all individuals reporting abuse indicated that their first time being abused occurred before the age of 18 years.

**SOCIODEMOGRAPHIC CHARACTERISTICS**

Sociodemographic differences between participants with a history of sexual violence and participants without were assessed. The only statistically significant difference was age: those with a history of sexual violence were older (mean [SD], 18.07 [1.66] years vs 17.68 [1.73] years).
Females with a history of sexual violence were less likely to use a condom at last vaginal intercourse (31.2% vs 46.9%, P < .001), to be consistent condom users in the previous 60 days (13.9% vs 29.1%, P < .001), and to be categorized as frequent condom users (35.4% vs 53.6%, P < .001) compared with those without sexual violence, respectively. With respect to measures of psychological well-being, those with a history of sexual violence reported more depressive symptoms (mean score, 19.29 vs 16.01, P < .001), lower self-esteem (mean score, 32.80 vs 26.57, P < .001), and higher levels of interpersonal stress (mean score, 32.80 vs 26.57, P < .001), respectively. Additionally, participants with a history of sexual violence reported being more fearful of negotiating condom use (mean score, 11.12 vs 9.85, P < .001) and had lower sexual communication self-efficacy (mean score, 19.87 vs 21.00, P < .001) than those without sexual violence, respectively.

**PARTNER COMMUNICATION AS A MEDIATOR BETWEEN HISTORY OF SEXUAL VIOLENCE AND PSYCHOLOGICAL AND SEXUAL RISK BEHAVIOR OUTCOMES**

Controlling for age, regarding the psychological outcome variables, when both history of sexual violence and fear of consequences of condom negotiation were regressed on depressive symptoms, self-esteem, and interpersonal stress, sexual violence’s dropped for each regression model (Table 4). The Sobel test revealed that sexual communication self-efficacy was a significant intervening variable of sexual violence’s association with all 3 psychological variables. Similarly, when both history of sexual violence and sexual communication self-efficacy were regressed on depressive symptoms, self-esteem, and interpersonal stress, sexual violence’s dropped for each regression model (Table 4). The Sobel test revealed that sexual communication self-efficacy was a significant intervening variable of sexual violence’s association with all 3 psychological variables.

Regarding sexual behavior outcome variables, when both history of sexual violence and fear of consequences of condom negotiation were regressed on condom use at last intercourse, consistent condom use in the past 60 days, and rate of condom use in the past 60 days, sexual violence’s dropped for each regression model (Table 3). The Sobel test revealed that fear of consequences of condom negotiation was a highly significant intervening variable of sexual violence’s association with all 3 sexual behavior variables. Similarly, when both history of sexual violence and sexual communication self-efficacy were regressed on condom use at last intercourse, consistent condom use in past 60 days, and rate of condom use in past 60 days, sexual violence’s dropped for each regression model (Table 4). The Sobel test revealed that sexual communication self-efficacy was a highly significant intervening variable of sexual violence’s association with all 3 sexual behavior variables.
sexual violence, in this sample demonstrates the substantial need for practitioners and policymakers to address and prioritize sexual violence as a critical area for research, prevention, and intervention, especially in young African American females. Although the prevalence of sexual violence seems alarmingly high, there are no comparable sources of prevalence data with which to compare it. It should be noted, given our conceptualization of sexual violence, the prevalence of sexual violence appears to be consistent with the prevalence rates of intimate partner violence, which has estimated physical and sexual abuse rates ranging from 9% to 46% among female high school students.5,29,30 However, most of these studies were conducted in predominately white females and thus may not be generalizable to urban African American samples. In a study of low-income African American women (aged 18–24 years), the prevalence of physical and sexual abuse ranged from 17% to 67%,31 which is consistent with the prevalence of sexual violence reported in our sample.

In terms of HIV/STD risk–associated sexual behaviors, our study more thoroughly examined the extent to which a history of sexual violence was related to maladaptive communication patterns with male sexual partners (ie, fear of condom negotiation and low sexual communication self-efficacy), which, in turn, could lead to engaging in high-risk sexual behaviors resulting in HIV or an STD. We found that, after controlling for age, young females with a history of sexual violence were indeed more likely to have poorer partner communication skills, resulting in an indirect path between sexual violence and HIV/STD risk–associated sexual behaviors that operates through disempowering women to communicate and negotiate safer sexual practices.10

Interestingly, partner communication skills also mediated the association between sexual violence and psychological well-being. Additional research is needed to develop and explore this critical, more complex path between abuse and psychological well-being.

**STUDY LIMITATIONS**

Although our results suggest a link between sexual violence experienced during childhood and adolescence and HIV/STD risk–associated behaviors in young females, this study is not without limitations. First, sexual violence was assessed by 2 self-report questions using a dichotomous scale and relied on retrospective reporting. Thus,
we could not determine when specific episodes of abuse occurred; the frequency, severity, or duration of abuse; or who perpetrated the abuse (eg, a family member, stranger, or boyfriend). A more thorough assessment based on an extensive survey instrument, or even a face-to-face interview, may be useful for more accurately assessing and characterizing abuse. Furthermore, we could not assess the timing between last abuse and the computerized assessment. Also, given our limited and extreme definition of sexual violence, it is likely that females from the non–sexual violence group may have also experienced other forms of sexual abuse. Additionally, the cross-sectional design of this study precludes precisely characterizing the temporal sequencing between sexual violence and HIV/STD risk–associated behaviors. Finally, the findings may not be generalizable to young people from other racial/ethnic groups or to young females with different sociodemographic characteristics. Future studies should be conducted to explore these findings in other populations of young females.

IMPLICATIONS

The prevalence of sexual violence and its sexual, psychological, and partner communication sequelae in this young African American sample has significant implications for clinical and preventive practices, especially for the design of HIV/STD risk–reduction programs for young African American females in urban settings. Given the high prevalence of sexual violence in this sample, using a very extreme definition of sexual abuse, the design of HIV/STD risk–reduction programs targeting African American adolescent girls in urban settings should include an abuse awareness component, as sexual abuse rates would likely be higher if we were to employ a broader, more conventional definition of sexual abuse. For instance, such a component could acknowledge that sexual violence is an all too common occurrence among adolescents and provide necessary referrals to medical, clinical, and social services to girls with a history of sexual violence. Additionally, future interventions should address the connection between abuse experienced in childhood or adolescence and unhealthy relationship characteristics, such as selecting and maintaining relationships with abusive partners. Finally, we found that youths with a history of sexual violence were having significantly more problems communicating about safer sex practices and negotiating condom use with sexual partners compared with nonabused youths. Thus, interventions tailored toward young females should provide partner communication training and condom negotiation skills as a means to empower them to refuse unwanted sexual advances as well as to protect themselves from HIV and STDs, especially in light of our findings indicating that females with a history of sexual violence were more likely to engage in high-risk sexual behaviors.

Accepted for Publication: October 26, 2007.
Correspondence: Jessica McDermott Sales, PhD, Department of Behavioral Sciences and Health Education, Rollins School of Public Health, Emory University, 1520 Clifton Rd NE, Room 132, Atlanta, GA 30322 (jmcdermott@emory.edu).

Author Contributions: The principal investigator of this study, Dr DiClemente, had full access to all the data in this study and takes responsibility for the integrity of the data and the accuracy of the data analysis. Study concept and design: Sales and Salazar. Acquisition of data: Sales, Salazar, Wingood, and Crosby. Analysis and interpretation of data: Sales, Salazar, DiClemente, and Rose. Drafting of the manuscript: Sales, DiClemente, and Rose. Critical revision of the manuscript for important intellectual content: Sales, Salazar, Wingood, DiClemente, and Crosby. Statistical analysis: Sales. Obtained funding: Wingood and DiClemente. Administrative, technical, and material support: Rose. Study supervision: Wingood and DiClemente.

Financial Disclosure: None reported.

Funding/Support: This study was supported by grant R01 MH061210 from the Center for Mental Health Research on AIDS, National Institute of Mental Health (Drs Wingood and DiClemente).

REFERENCES


Announcement

Trial Registration Required. In concert with the International Committee of Medical Journal Editors (ICMJE), Archives of Pediatrics and Adolescent Medicine will require, as a condition of consideration for publication, registration of all trials in a public trials registry (such as http://ClinicalTrials.gov). Trials must be registered at or before the onset of patient enrollment. This policy applies to any clinical trial starting enrollment after July 1, 2005. For trials that began enrollment before this date, registration will be required by September 13, 2005, before considering the trial for publication. The trial registration number should be supplied at the time of submission.

For details about this new policy, and for information on how the ICMJE defines a clinical trial, see the editorials by DeAngelis et al in the September 8, 2004 (2004; 292:1363-1364) and June 15, 2005 (2005;293:2927-2929) issues of JAMA. Also see the Instructions to Authors on our Web site: www.archpediatrics.com.