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Racial Differences in HIV/AIDS Discussion Strategies and Sexual Risk Behaviors among Drug Abusing Female Criminal Offenders

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Abstract

African American female inmates are disproportionately affected by the human immunodeficiency virus (HIV), the virus that causes acquired immune deficiency syndrome (AIDS), with heterosexual contact as the primary mode of transmission. This could be the result of racial differences in the strategies used by women to persuade a potential sexual partner to discuss AIDS and engage in condom use. Data were collected from 336 female inmates in three correctional institutions as part of the Reducing Risky Relationships for HIV (RRR-HIV) protocol within the Criminal Justice Drug Abuse Treatment Studies (CJ-DATS) cooperative agreement. Bivariate analyses indicated that African American drug using women were more likely than Whites to use the rational, withdrawal, and persistence approaches to discuss AIDS with an intimate sexual partner. Negative binomial regression models were used to identify which interpersonal discussion strategies were significant correlates of the number of the times White participants and African American participants had unprotected vaginal sex in the 30 days prior to incarceration. Results from the multivariate model indicate that White women who are more likely to use the rational discussion strategy were 15% less likely to engage in vaginal sex without a condom; however, these findings were not replicated in the African American sample. Findings add to the literature on racial differences in HIV/AIDS discussion strategies and sexual risk behaviors among drug abusing female criminal offenders.

Keywords

AIDS Discussion Strategies; race; criminal offenders; HIV risk behaviors

Introduction

The human immunodeficiency virus (HIV), or the virus that causes the acquired immunodeficiency syndrome (AIDS), is a concern in correctional settings. In fact, the Bureau of Justice Statistics reports that HIV rates among inmates are higher among female prison inmates, with the highest proportion among African American females (Maruschak 2007). There are several factors which could be associated with the higher rate of HIV infection among African American females. Socio-cultural factors in the African American community including unequal sex ratios and a lower likelihood of inter-racial dating among African American women may influence the degree of interpersonal power in sexual relationships among African American women (Gilbert 2003). In addition, a proportionately larger number of African American males (4.8%) are incarcerated, as compared to white (0.7%) or Hispanic (1.9%) males (Sabol, Minton, & Harrison 2007). As such, women may be more likely to engage in HIV risk behaviors, such as unprotected sex, to attract and keep a sexual partner in order to fulfill financial and/or emotional needs. In order to better understand these factors, this study examines racial differences in the six interpersonal strategies associated with the discussion of HIV/AIDS, which include the rational, manipulative, withdrawal, charm, subtlety, and persistence strategies (Snell & Finney 1990). In addition, each of the six HIV/AIDS discussion strategies is examined as a correlate of the number of unprotected vaginal sex encounters separately among African American and White females in the 30 days before their incarceration.

Racial Differences in HIV Risk Behaviors

According to the Bureau of Justice Statistics (BJS), the number of women prisoners has been increasing since 2000 (Sabol, Couture & Harrison 2007). The increase in incarceration is racially disparate among women because the incarceration rates have increased faster among African American women, as compared to White women (Blankenship et al. 2005). Drug-related offenses, especially for crack cocaine, have significantly contributed to the ballooning prison population in recent years as a result of more punitive U.S. drug policies (Blankenship et al. 2005). More punitive U.S. drug policies, combined with the drug use and socio-cultural issues, place the African American community at risk for certain infectious diseases. For example, the HIV/AIDS epidemic has been identified as a public health concern in the African American community and is the number one cause of death among African American women aged 25–34 years (Anderson & Smith 2003). While African Americans comprise about 13% of the U.S. population, African Americans account for over 50% of new HIV cases (CDC 2004a). Heterosexual contact is the primary mode of transmission among African American women, accounting for 81% of cases (CDC 2004a).

However, it may not be race/ethnicity alone that is a risk factor for HIV infection. Rather, it may be the socio-cultural context that is critically important for HIV risk among African American women (Bowleg et al. 2004). For example, socio-cultural inequalities including unequal sex ratios and gender-based power dynamics may each contribute to the disproportionate rate of HIV and HIV-risk related behaviors among African American women (Molina & Basinait-Smith 1998; Gomez & Marín 1996; Gilbert 2003; Amaro 1995).

The sex ratio is more unbalanced for African Americans than for any other racial group (US Census Bureau 2000a) and African American women are the least likely to have relationships with men from other racial/ethnic groups (Staples 1981). This gender imbalance is even more prominent when considering the skewed Male Marriageable Pool Index (MMPI), which is the ratio of employed men to women of the same age and race (Wilson 1990). Specifically, there is a shrinking pool of economically stable, or “marriageable,” men because African American males have high rates of premature mortality (Wilson 1990) and involvement in the criminal justice system (Mayer 1999). Therefore, African American men have been called a

“commodity,” and subsequently, they have more potential sexual partners, are less likely to enter into a monogamous relationship, and can attract women without offering many incentives (Kiecolt & Fossett 1997). Consequently, African American women have less interpersonal power because of gender-based power dynamics (Logan, Cole & Leukefeld, 2002; Albrecht et al. 1997; Adimora, Schoenback & Martinson 2001) and may be more likely to engage in HIV risk behaviors, such as unprotected sex, to attract and keep an African American man to fulfill financial and/or emotional needs (Logan, Cole & Leukefeld 2002). In fact, African American women have low rates of condom use because of an adherence to traditional gender roles (Taylor 1995) and negative perceptions of condoms (Wingood & DiClemente 1998; Kalichman, Hunter & Kelly 1992). Therefore, changing basic belief/attitudes towards condom use and increasing partner communication regarding safe sex practices is important for African American women in reducing the transmission of HIV and other infectious diseases.

Racial Differences in Communication Styles

Communication strategies may vary according to the socio-cultural context. Specifically, there can be racial differences in how HIV/AIDS is discussed with intimate sexual partners. There are different interpersonal discussion strategies that can be used to initiate a discussion about HIV/AIDS with an intimate partner. In order to understand these strategies, Snell and Finney (1990) developed the AIDS Discussion Strategy Scale (ADSS) which examines six HIV/AIDS-related discussion strategies including: rational, manipulation, withdrawal, charm, subtlety, and persistence. The rational HIV/AIDS-related discussion approach is rooted in the health belief model (HMB) (Becker, 1974) and the theory of reasoned action (Fishbein & Ajzen 1975). This strategy assumes that individuals are rational in their decision-making processes. Using a direct, rational strategy to discuss HIV/AIDS with an intimate partner is often promoted in various HIV prevention interventions, such as the National Institute on Drug Abuse (NIDA) Standard HIV intervention (Wechsberg et al. 1997; Coyle 1993). This direct approach is considered to be the strategy most likely to produce the desired behavioral outcome of condom use (Snell & Finney 1990).

Several other AIDS-related discussion strategies can be used to elicit a conversation about HIV/AIDS. For example, in the manipulation strategy, tactics such as deception could be used to facilitate HIV/AIDS discussions. Women could also use withdrawal approaches (e.g., refraining from sex or even conversation) until their partner agrees to discuss HIV/AIDS. Charm could be used to influence a partner to talk about HIV/AIDS. Subtlety, or delicately dropping hints to your intimate partner that you want to discuss HIV/AIDS, is another more passive strategy. Persistence, or repeatedly bringing up the topic, is the most aggressive tactic used to discuss HIV/AIDS with an intimate partner.

For this study, the rational HIV/AIDS discussion strategy is the primary communication approach of interest. Based upon the socio-cultural context (e.g., unequal sex-ratios or gender-based power dynamics) of the African American community, it is hypothesized that African American female offenders will be less likely than White female offenders to use a rational HIV/AIDS-related discussion strategy. It is also hypothesized that using a rational discussion strategy will be associated with more condom use among White female inmates; however, it will not be a significant correlate in the model with African American female offenders because other socio-cultural factors will be playing a more important role.

There are no known studies examining racial differences in these six approaches using the ADSS subscales or the impact of these communication strategies on the use of condoms. The current study is designed to increase the understanding of racial differences in the inter-personnel communication styles that women use when discussing AIDS with an intimate partner. The purpose of this study was to first identify differences between White and African American female offenders on demographic characteristics, participation in HIV risk

behaviors, and AIDS discussion strategies (i.e., rational, manipulative, withdrawal, charming, subtlety, and persistence). Second, negative binomial regression models were used to determine if each of the AIDS discussion strategies was a significant correlate of the number of times African American female offenders and White female offenders had unprotected vaginal sex in the 30 days prior to incarceration.

Methods

Sample and Procedure

Data for these analyses were derived from the Reducing Risky Relationships for HIV (RRR-HIV) protocol under the auspices of the Criminal Justice Drug Abuse Treatment Studies (CJ-DATS) cooperative agreement (Fletcher & Wexler 2005). The RRR-HIV protocol was developed by the Central States Center at the University of Kentucky. Other participating research centers included Brown University, the University of Connecticut, and the University of Delaware. Additional details on the RRR-HIV intervention are discussed by Staton-Tindall and colleagues (2007).

Incarcerated women were recruited from correctional institutions in Connecticut, Delaware, and Kentucky (n=336). Due to the timing of implementation, data from the women recruited in Rhode Island are not included in this study. Eligibility criteria included: (1) being within 6 weeks of meeting the parole board or being released from the institution; (2) using substances at least weekly before prison; (3) being at least 18 years of age; and (4) willingness to participate. Individuals were excluded from the study if they experienced psychotic features in the past month, had parole conditions that would prohibit their participation in the protocol, or were not willing to participate in the intervention if randomized. Informed consent was collected from all eligible participants by trained research staff. Data was collected by trained research staff in a face-to-face interview which took approximately 60–90 minutes to complete. Each participant received \$20 for the baseline interview. This protocol was reviewed and approved by the CJ-DATS cooperative agreement's Research Management Subcommittee as well as by the Institutional Review Boards at all four participating Universities.

Variable Definitions and Measures

The purpose of this analysis was to examine differences between White and African American female offenders across three domains: socio-demographic characteristics, HIV-risk behaviors (including drug use), and HIV/AIDS discussion strategies.

Socio-demographic characteristics—The CJ-DATS Core Questionnaire, which can be obtained at the CJDATS website (<http://www.cjdats.org>), measured socio-demographic characteristics. The socio-demographic characteristics include: age, education (dichotomized into high school and less than a high school education), study site (Kentucky, Delaware and Connecticut), marital status (married/cohabitating, single/never married and divorced/separated/widowed), employment status during the six months prior to the current incarceration (categorized into full-time, part-time and unemployed), and living situation in the 30 days prior to the current incarceration (categorized into own home, someone else's home, homeless/shelter, and other living situation).

HIV-risk behaviors—Drug use was measured via the Addiction Severity Index –5th edition (McLellan, Luborsky, O'Brien & Woody 1980). Specifically, participants were asked if they had ever used the substance and if so, their level of use in the 6 months and 30 days prior to their current incarceration (i.e., monthly, weekly, daily, etc). Use in the prior 30 days was categorized into daily use (0=no, 1=yes) if participants reported using at least daily in the 30 days prior to incarceration. Participants were also asked if they had ever injected drugs (0=no,

1=yes). As part of the CJ-DATS Core Questionnaire, participants were also asked if they had ever been told they had one of the following infectious diseases: HIV, genital herpes, genital warts (HPV), syphilis, gonorrhea (“clap”), trichomoniasis, Chlamydia, chronic hepatitis B or chronic hepatitis C. If they answered “yes” they were coded 1 and if they responded “no” they were coded 0.

As part of the National Institute on Drug Abuse Risk Behavior Assessment (NIDA 1995), participants were asked if they had sex without a condom in the 30 days prior to their current incarceration. If they replied in the affirmative, they were asked the total number of unprotected sexual encounters: with someone who was not their spouse or primary partner, with someone who shot drugs with needles, with someone who smokes crack/cocaine and/or methamphetamine, while high, while trading sex, during vaginal sex, during oral sex, and during anal sex.

HIV/AIDS discussion strategies—A modified version of the AIDS Discussion Strategy Scale (ADSS) (Snell & Finney 1990) was used to determine what strategies women use when discussing HIV/AIDS with their intimate sexual partner(s). The ADSS consists of six subscales, including *rational*, *manipulation*, *withdrawal*, *charm*, *subtlety* and *persistence*. Participants were asked to respond to items using a 5 point Likert scale: -2 = definitely would not do this, -1 = might not do this, 0 = not sure where I would do this, 1 = might do this, 2 = would definitely do this.

In the scale developed by Snell and Finney (1990), the *rational* discussion subscale consisted of 26 items and the manipulative subscale 20 items. In pilot testing the instrument, there was extreme participant fatigue because of the length of the entire survey instrument. After running factor analyses on the items within the rational discussion strategy scale using the current sample, six items were chosen. Using the current sample, these items also demonstrated good internal reliability ($\alpha = .89$) and included: “I would simply tell my partner that I wanted to discuss AIDS with him/her”; “I would explain the reason that it’s important for us to discuss AIDS”; “I would make suggestions that we discuss AIDS”; “I would tell my partner it’s in his/her best interest to discuss the issue of AIDS”; “I would insist the my partner and I discuss AIDS”; and “I would tell my partner we are close enough to discuss AIDS”.

Five items were chosen for the *manipulation* strategy subscale after completing a factor analysis on the items using the current sample. The internal reliability ($\alpha = .71$) was also good using the current sample. Items from the manipulative approach included: “I would use deception to get my partner to talk about AIDS”; “I would tell my partner I have a lot of knowledge about the topic of AIDS”; “I would get angry and demand that he/she talk about AIDS with me”; “I would promise sexual rewards if we first discussed AIDS”; and “I would try to manipulate my partner into a discussion on AIDS”.

The remaining discussion strategy subscales utilized the same items set forth in the original scale. The *withdrawal* AIDS discussion strategy subscale contains 4 items ($\alpha = .69$) (e.g., “I would refrain from sexual contact until we discussed AIDS”). Four items also comprised the fourth discussion strategy, *charm*, with a Cronbach’s alpha of .82. A typical statement that was included as part of the charm HIV/AIDS discussion strategy was “I would be especially sweet, charming, and pleasant before bringing up the subject of AIDS.” The *subtlety* subscale consisted of 3 items ($\alpha = .72$) (e.g., “I would subtly bring up the topic of AIDS”). The final HIV/AIDS discussion strategy, *persistence*, was comprised of four items with a Cronbach’s alpha of .84. An example of an item in this subscale was “I would keep bugging my partner to discuss the topic of AIDS.”

Statistical Analyses

In order to examine differences among White and African American women, contingency table analysis (chi-square statistic) and t-tests were used for categorical and continuous variables, respectively. Findings were considered statistically significant if the p-value was less than or equal to 0.05.

We were also interested in examining the impact of each of the six HIV/AIDS discussion strategies on the number of times a participant had unprotected vaginal sex in the 30 days prior to incarceration in both the White and African American samples of female inmates. The number of times a female offender had unprotected vaginal sex was selected as the dependent variable of interest because this behavior was the unprotected sexual behavior that occurred mostly frequently. Due to high correlation between the HIV/AIDS discussion strategies (see Table 1), each discussion strategy was examined in a separate multivariate model. Since the dependent variable was count data (i.e., number of unprotected vaginal sexual encounters) and overdispersion was an issue, negative binomial regression was used (Long & Freese 2006). Specifically, negative binomial regression models were used to identify whether each of the HIV/AIDS discussion strategies were independent correlates of the number of unprotected vaginal sexual encounters in the 30 days before incarceration. Given the presence of effect modification by race for several of the discussion strategies, we ran separate multivariable models for White and African American female offenders. Results of the negative binomial regression models reported the incidence rate ratios (IRR) and 95% Confidence Intervals. Data analyses were conducted using STATA version 10.0 (StataCorp, College Station, TX).

Results

Socio-demographics

The median age of participants is 34.3 years (interquartile range [IQR]: 27.3, 41.8) (Table 2). A majority had at least a high school education and most were unemployed in the six months before their current incarceration. Most of the women were living in either their own home or someone else's home, while less than 10% were homeless or living in a shelter before being incarcerated. There were significant differences between the White and African American female inmates by site ($p<.001$). The majority of participants at the Kentucky site were White and only about half were White at the Delaware and Connecticut sites. African American female inmates were significantly more likely than their White counterparts to have never been married ($p<0.001$).

HIV-risk behaviors

As shown in Table 3, daily prescription opioid use was most prevalent among the White females (35.8% versus 5.6% among African Americans, $p<0.001$), whereas daily crack use was more prevalent among the African Americans (45.6% versus 32.5%, $p=0.03$). African American women were also significantly more likely than the White women to have reported daily marijuana use in the six months prior to their current incarceration (38.9% versus 25.2%, $p=0.02$). White female inmates were also significantly more likely to report lifetime injection drug use ($p<0.001$).

Also in Table 3, the following self-reported infectious diseases were significantly greater among the incarcerated African American women compared with White women; specifically for HIV, syphilis, gonorrhea, trichomoniasis, and Chlamydia. White female inmates were significantly more likely to self-report hepatitis C infection ($p=0.016$). White females were more likely than African American females to report having engaged in unprotected sex with an injecting drug user, unprotected sex with a stimulant user, and unprotected vaginal sex in the thirty days prior to incarceration. African American females, as compared to Whites, were

significantly more likely to report having engaged in unprotected sex trading in the thirty days prior to incarceration ($p=.013$). In examining the number of unprotected sexual encounters, incarcerated white women were more likely than African American women to report a greater number of unprotected sexual encounters with injecting drug user(s) and/or stimulant user(s).

HIV/AIDS discussion strategies

Results also indicate that White and African American female inmates use different communication styles for discussing HIV/AIDS with their intimate sexual partner(s). The means and standard deviations for the six ADSS subscales are displayed in Table 3. Incarcerated African American women were significantly more likely than White women to use the rational ($p<0.01$), withdrawal ($p<0.001$), and persistent ($p<0.05$) approaches to discuss HIV/AIDS with an intimate partner. White female inmates were significantly less likely to use manipulation as a strategy to talk about HIV/AIDS ($p<0.01$). There were no significant racial differences in the use of the charm or subtlety HIV/AIDS discussion strategies. Overall, the rational strategy was the most commonly used approach, regardless of race, by women to persuade an intimate partner to discuss HIV/AIDS. In addition, the mean scores on the manipulation strategy were negative for both White and African American incarcerated females suggesting that manipulation was rarely used when trying to have an HIV/AIDS discussion with an intimate partner.

Multivariate models

In our first set of multivariable models, we found the interaction of race and the rational discussion strategy scale to be significantly associated with the number of unprotected vaginal sex encounters (results not shown). Therefore, we stratified the models by race. Results from the multivariable models (Table 4) indicate that the only discussion strategy that was associated with the number of unprotected vaginal sexual encounters among incarcerated White women was the rational discussion strategy. Specifically, after adjusting for age, study site and marital status, White women who were more likely to use the rational discussion approach as measured by the ADSS were 15% less likely to engage in unprotected vaginal sex (Adjusted IRR: 0.85, 95% Confidence Interval: 0.73, 0.98). The other five AIDS discussion strategies (i.e., manipulation, withdrawal, charm, subtlety, and persistence) were not significantly associated with unprotected vaginal sex encounters for White female inmates in the multivariate models. Using the sample of African American female offenders, the rational discussion strategy was not a statistically significant correlate of the number of unprotected vaginal sex encounters, when controlling for age, study site, and marital status. Moreover, none of the other five AIDS discussion strategy subscales were associated with unprotected vaginal sex encounters among incarcerated African American women in the multivariate models (results for non-significant models are not shown).

Discussion

There is a high prevalence of HIV/AIDS in certain groups, such as prisoners and the African American community. Therefore, it is important to examine behavioral strategies which can reduce the transmission of HIV in these groups. In this study, we examined racial differences in interpersonal communication strategies to discuss HIV/AIDS. This is an important line of research given that previous findings have demonstrated that discussing HIV/AIDS triggers the condom use (Catania et al. 1992; Allen, Emmers-Sommer & Crowell 2002). However, the majority of studies have examined college populations (Snell & Finney 1990; Smith 2003; Powell & Segrin 2004; Dilorio et al. 2000) and there are no known studies that examined racial differences in HIV/AIDS discussion strategies among female criminal offenders. Therefore, this study contributes to the criminal justice and HIV prevention literature by identifying which

HIV/AIDS discussion approaches are associated with the use of condoms in both White and African American female offender populations.

Results revealed significant racial differences in socio-demographic characteristics, participation in HIV risk behaviors, and HIV/AIDS discussion strategies. Consistent with previous literature (Wilson 1990), African American women were significantly more likely than White women to have never been married. This socio-cultural phenomenon may be the result of unequal sex ratios in the African American community. Specifically, African American men have high rates of premature mortality and incarceration (Wilson 1990; Mayer 1999). The higher prevalence of unmarried African American women could be attributed to the lack of eligible marriage partners because African American women are the least likely racial group to engage in interracial dating and marriage (Staple 1981).

There were also noteworthy racial differences in self-reported HIV risk behaviors including drug preferences, infectious diseases, and unprotected sexual behaviors. African American female inmates were significantly more likely to report using crack and marijuana on a daily basis, whereas White female inmates were more likely to report the daily use of prescription opioids in the six months prior to incarceration. These racial differences could in part be due to geographic differences. For example, the majority of the sample was recruited from Kentucky, which is a state that has fewer African Americans (7.4%) than the national average (12.4%) (U.S. Census Bureau 2000b). Moreover, there is a high prevalence of prescription opioid use in the rural state of Kentucky (Havens, Oser, & Leukefeld 2007; Havens et al. 2007). Whites' preference to use prescription opioid on a daily basis could also partially explain the higher prevalence of lifetime injection drug use among Whites because research suggests that prescription opioids are injected (Havens, Walker & Leukefeld 2007). Conversely, crack is widely available in African American communities and is a key risk factor for the sexual transmission of HIV (Fullilove et al. 1990; Edlin et al. 1994). As such, there have been several HIV interventions that have been developed for African American crack-involved women which have demonstrated reductions in HIV risk behaviors (Weschsberg et al. 2004; Sterk, Theall & Elifson 2003).

It is also important to examine racial disparities in infectious diseases, especially those that are sexually transmitted because STIs increase HIV risk from 2 to 5 times (Kraut-Becher et al. 2008). Consistent with data from the Centers for Disease Control and Prevention (CDC), there was a higher prevalence of infectious diseases (including HIV, syphilis, gonorrhea, trichomoniasis, and Chlamydia) in African American female inmates as compared to their White counterparts (CDC, 2004b). However, this study did not support the CDC's finding that the prevalence of HCV infection is substantially higher among African Americans than Whites (CDC, 1998). On the contrary, White women reported more hepatitis C, which could be the result of the higher prevalence of injection drug use among White female offenders in this study. A meta-analysis by Vescio and colleagues (2008) found that incarcerated injection drug users were about 24 times more likely than non-injectors to be HCV positive.

It is disconcerting that the majority of female offenders in the current study reported engaging in unprotected sex in the 30 days prior to incarceration. Furthermore, racial inequalities emerged in both the prevalence and mean number of unprotected sexual encounters. White women reported engaging in more were more likely to report having sex with an injecting drug user or a stimulant user in the 30 days before their incarceration. Again, this could be related to racial differences in drug preferences with Whites reporting more daily use of prescription opioids, which is also a significant public health concern because HIV is primarily transmitted via heterosexual contact with a high risk person, which includes injection drug users and stimulant users (CDC, 2006). Moreover, African American females were more likely to engage in unprotected sex when trading sex for money, drugs, or gifts in the 30 days prior to

incarceration. Our findings support previous studies which found that African Americans are more likely than Whites to engage in sex work (Wright et al. 2007; Kraut-Becher et al. 2008) and less likely to consistently use condoms (Gilbert 2003; Catania et al. 1992).

Besides abstinence, condom use is the best protection against the sexual transmission of HIV, and effective communication strategies are one of the best predictors of condom use (Catania et al. 1992). This study found racial differences in the use of discussion strategies to talk about HIV/AIDS with a sexual partner. Of particular interest is the rational HIV/AIDS discussion strategy which is a direct way of talking about HIV/AIDS. The rational strategy has been incorporated into HIV risk-reduction interventions such as the National Institute on Drug Abuse (NIDA) Standard HIV intervention (Wechsberg et al. 1997; Coyle 1993) and is considered to be the approach that is mostly likely to produce a risk behavior change (e.g., condom use) (Snell & Finney 1990). Our findings are encouraging since the rational strategy was the most frequently used approach by all female offenders. However, contrary to our expectations, African Americans female inmates were more likely to use rational approaches to discuss AIDS with an intimate partner than incarcerated White women. It is interesting to note, however, that the rational communication strategy was only associated with fewer unprotected sexual encounters among White women. Among African American women, the rational AIDS discussion strategy was not a significant correlate of the number of unprotected vaginal sex encounters in the 30 days before their incarceration. The racial disparity in the relationship between using a rational approach to discuss HIV/AIDS and engaging in fewer unprotected vaginal sex acts suggests the need for culturally-tailored HIV interventions. Specifically, for African American female offenders, using rational discussion “tactics” with an intimate sexual partner was not associated with unprotected vaginal sex. Therefore, HIV interventions for African American women must focus on more than just communication by addressing social-cultural issues, HIV knowledge, motivation for condom use, and behavioral skills (e.g., condom self-efficacy and correct condom use).

There are several limitations that must be acknowledged. This study is based upon self-reported data which could be impacted by recall bias and social desirability bias; however, it should be noted that previous research supports the validity of self-report data among drug users (Harrison & Hughes 1997; Darke 1998). These findings are limited to drug abusing criminal offenders in KY, CT, and DE. In addition, cross-sectional data which does not allow for the examination of the causal mechanisms underlying unprotected vaginal sex among African American and White women. Future studies should capitalize upon longitudinal study designs to identify which HIV/AIDS discussion strategies are predictors of condom use among both African American and White female offenders. Moreover, future research could focus on the socio-cultural context of relationships. For example, additional research is needed to examine the context of sexual relationships (e.g., monogamous, homosexual, etc.), relationship dynamics (e.g., power and abuse), and racial differences in the use of various HIV/AIDS discussion strategies immediately before sexual encounters to better disentangle the relationships between communication styles and unprotected sex.

These limitations notwithstanding, the results from this study have several contributions to the literature. Primarily, there are racial differences in interpersonal strategies used to discuss HIV/AIDS with an intimate sexual partner, with African American female offenders being significantly more likely to use rational, withdrawal, and persistent approaches to facilitate a discussion on the topic of HIV/AIDS. Moreover, the rational HIV/AIDS discussion strategy was associated with fewer unprotected vaginal sex encounters among White women in the 30 days before incarceration; however, this relationship was not significant in the same multivariate model for African American females. In sum, this research suggests the driving force seems to be higher prevalence rates of HIV in African American communities and that each risky encounter for African American women has a higher likelihood of infection

transmission. Therefore, more comprehensive culturally-specific HIV risk-reduction interventions are critical for African American female offenders to effectively produce sexual behavioral changes.

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Table 1
Intercorrelations between AIDS Discussion Strategy Subscales

	Rational	Manipulative	Withdrawal	Charming	Subtlety	Persistence
Rational	1.000					
Manipulative	0.421	1.000				
Withdrawal	0.535	0.513	1.000			
Charming	0.485	0.635	0.568	1.000		
Subtlety	0.694	0.413	0.404	0.511	1.000	
Persistence	0.776	0.557	0.509	0.593	0.659	1.00

p<0.001 for all correlations

Table 2
Demographic Characteristics of Incarcerated White and African American Females

	White N=246		African American n=90		p-value
	n	%	n	%	
Age (median, interquartile range)		34.3 (26.9 –41.5)		35.7 (28 –43.1)	0.429
Education					
High School	164	66.7	53	58.9	0.199
< High School	82	33.3	37	41.1	
Site					
Kentucky	197	80.1	40	44.4	<0.001
Delaware	36	14.6	32	35.6	
Connecticut	13	5.3	18	20.0	
Marital Status					
Married/Cohabiting	37	15.0	7	7.8	<0.001
Never Married	86	35.0	66	73.3	
Divorced/Separated/Widowed	123	50.0	17	18.9	
Employment Prior to Incarceration					
Full-Time	72	29.4	32	35.6	0.551
Part-Time	40	16.3	14	15.6	
Unemployed	133	54.3	44	48.9	
Living Situation Prior to Incarceration					
Own Home	102	41.5	31	34.4	0.298
Someone Else's Home	113	45.9	49	54.4	
Homeless/Shelter	17	6.9	3	3.3	
Other	14	5.7	7	7.8	

Table 3
Drug Use, Self-Reported Infectious Diseases, Unprotected Sexual Behaviors, and Communication Styles among Incarcerated White and African American Females

	White n=246		African American n=90		p-value
	n	%	n	%	
Daily Drug Use¹					
Alcohol	72	29.3	29	32.2	0.594
Crack	80	32.5	41	45.6	0.030
Cocaine	38	15.4	9	10.0	0.220
Heroin	18	7.3	3	3.3	0.214
Marijuana	62	25.2	35	38.9	0.020
Prescription Opioids	88	35.8	5	5.6	<0.001
Methamphetamine	19	7.7	4	4.4	0.341
Injection Drug Use (Lifetime)	124	50.4	12	13.3	<0.001
Self-Reported Infectious Diseases(Lifetime)					
HIV	2	0.8	5	5.6	0.001
Genital Herpes	12	4.9	3	3.3	0.767
Genital Warts	30	12.2	5	5.6	0.105
Syphilis	2	0.8	5	5.6	0.016
Gonorrhea	23	9.3	27	30.3	<0.001
Trichomoniasis	56	22.8	33	36.7	0.012
Chlamydia	55	22.4	31	34.4	0.034
Hepatitis B	5	2.0	0	0	0.330
Hepatitis C	38	15.4	5	5.6	0.016
Ever had Sex without a Condom²					
Not with Primary Partner	79	32.1	33	36.7	0.436
With Injection Drug User	56	22.8	1	1.1	<0.001
With Stimulant User	124	50.4	30	33.3	0.006
While High	185	75.2	64	71.1	0.483
While Trading Sex	48	19.5	30	33.3	0.013
During Vaginal Sex	195	79.3	62	68.9	0.035
During Anal Sex	36	14.6	11	12.2	0.723
During Oral Sex	179	72.8	67	74.4	0.783

	White n=246		African American n=90		p-value
	n	%	n	%	
Mean Number of Sexual Encounters without a Condom² (mean number encounters[SE])					
Not with Primary Partner	19.0 (5.0)		3.7 (0.9)		0.066
With Injection Drug User	6.2 (1.3)		0.01 (0.01)		0.005
With Stimulant User	26.8 (4.7)		6.5 (1.5)		0.010
While High	37.6 (5.1)		20.3 (4.5)		0.052
While Trading Sex	18.2 (5.1)		4.3 (1.0)		0.103
During Vaginal Sex	26.7 (3.5)		17.3 (3.1)		0.140
During Anal Sex	20.0 (3.06)		16.6 (2.3)		0.512
During Oral Sex	1.5 (0.4)		1.5 (6.9)		0.935
AIDS Discussion Strategies (mean[SE])					
Rational	1.04 (0.06)		1.37 (0.08)		0.002
Manipulative	-0.40 (0.06)		-0.02 (0.10)		0.001
Withdrawal	0.01 (0.08)		0.65 (0.16)		<0.001
Charming	0.12 (0.07)		0.39 (0.12)		0.062
Subtlety	0.66 (0.06)		0.87 (0.12)		0.115
Persistence	0.52 (0.07)		0.85 (0.11)		0.018

¹In the 6 months prior to incarceration;

²In the 30 days prior to incarceration

Table 4

Multivariable Models Identifying the Significant Correlates of Unprotected Vaginal Sex among White and African American Female Offenders

	White (n=246)		African American (n=79)	
	Adjusted Incidence Rate Ratio	95% Confidence Interval	Adjusted Incidence Rate Ratio	95% Confidence Interval
ADSS – Rational	0.85	0.73, 0.98	1.21	0.78, 1.85
Age	1.00	0.99, 1.00	0.98	0.94, 1.01
Study Site				
Kentucky	1.00		1.00	
Delaware	1.16	0.70, 1.92	1.35	0.61, 3.01
Connecticut	0.48	0.22, 1.05	1.77	0.68, 4.60
Marital Status				
Married	1.00		1.00	
Never Married	0.96	0.59, 1.57	1.02	0.28, 3.63
Separated/Divorced/Widowed	1.25	0.78, 1.98	1.79	0.43, 7.39