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Sex partner type, drug use and condom use self-efficacy among African Americans from disadvantaged neighborhoods: Are associations with consistent condom use moderated by gender?

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Abstract

Gender inequalities in sexual behavior are explored from the perspective of the theory of gender and power. This study focused on the effect of sex partner type (steady versus casual), drug use, and condom use self-efficacy regarding consistent condom use (CCU) among a community-based sample of adults. The sample included 1,357 African American men and women (*M* age 37.0, *SD* 13.1 years; 44% women, 66% men) from 61 disadvantaged census block groups in Atlanta, GA as part of a study of individual and neighborhood characteristics and HIV risk-taking. Having a steady partner decreased the odds of CCU, while higher condom use self-efficacy increased the odds of CCU. Among non-drug users, having a drug-using partner was associated with decreased odds of condom use for women only. Women with drug-using partners, especially a steady partner, were least likely to report CCU. Therefore, interventions intended to empower CCU among women need to expand beyond acknowledging the reduced control that women who use drugs demonstrate to also consider those who have drug-using sexual partners.

Keywords

AIDS/HIV; Condoms; Drug Abuse; Gender Differences; African Americans

Behavioral research on sexual behavior has moved beyond individual determinants to include contextual influences (DiClemente, Salazar, & Crosby, 2007; Latkin & Knowlton, 2005). A main driver for this expanded exploration was the need for a comprehensive understanding of the salient role of sexual behaviors as HIV/AIDS continued to spread through unsafe sex, specifically inconsistent condom use (Latkin & Knowlton, 2005). Building on the theory of gender and power (Connell, 1987), research on sexual behavior has expanded to include social and structural influences on sexual behavior, with an emphasis on gender-based inequalities. This conceptual model focuses on three domains: the sexual division of labor, the structure of affective attachments and social norms, and the sexual division of power (Wingood & DiClemente, 2000). This last domain refers to inequities in control and authority between genders and has been shown to articulate the most proximal of risk factors for unprotected sex (DePadilla, Windle, Wingood, Cooper, &

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DiClemente, 2011). It highlights exposures created by sex partner characteristics, including high-risk partners such as those who have or had sex partners whose risk for HIV was unknown. Behavioral risk factors that have been identified within the domain of sexual division of power include condom use self-efficacy as a protective factor and a history of drug use as a risk factor (Wingood & DiClemente, 2000).

At the core of the gender and power paradigm is an emphasis on the inequality of power between men and women. Considering this inequality, women's opinions and requests may be taken less seriously or dismissed by their male partners and women. Moreover, women may be more likely to be emotionally and otherwise abused when suggesting protective sex if their male sex partners view it as a sign of disrespect or lack of trust. Reactions from the male partner may range from emotional to physical abuse, which, in turn, have been shown to decrease women's self-efficacy, increase the likelihood of alcohol and drug use, and reduce condom use self-efficacy (DePadilla et al., 2011; Raj, Silverman, Wingood, & DiClemente, 1999).

The main objective of this study was to examine if behavioral risk factors triggered by the sexual division of power were associated with consistent condom use (CCU) during vaginal sex. Key behavioral risk factors included sex partner type, drug use among the respondents as well as their sex partners, and condom use self-efficacy. In addition, the potential for the moderation by gender of the associations between these risk factors and CCU was also explored.

Sex Partner Types

Sex partner type tends to be conceptualized based on characteristics such as the length of the relationship, perceptions of sex and expectations for relationships, and perceived closeness and/or commitment between the partners. Conceptualizations of a steady partner, at times also referenced as main partner, frequently assume a close and/or long-term, ongoing relationship, with expected and demonstrated affection, social support, and commitment (Hock-Long et al., 2013; Lescano, Vazquez, Brown, Litvin, & Pugatch, 2006; Noar et al., 2012). Steady or main partners also are referenced as regular sex partners (Macaluso, Demand, Artz, & Hook III, 2000). Connotations of love, commitment, trust, and similar qualities make condom use undesired among steady partners (Bernstein et al., 2013; Corbett, Dickson-Gómez, Hilario, & Weeks, 2009; Nelson, Morrison-Beedy, Kearney, & Dozier, 2011). Even when one of the steady partners has been identified with a sexually transmitted disease (STD), including HIV, or when one of the partners is known to have had sex with individuals who may have engaged in unsafe sex with others, condom use remains perceived as in violation with the expectations and nature of the steady partnership (Corbett et al., 2009). Perceptions of and commitment to a steady sex partner appear to overwrite potential motives in favor of condom use, especially among women (De Visser & Smith, 2001; Tucker et al., 2012).

In contrast to the characteristics associated with steady partners, casual partnerships are perceived as being more recent or short-term (e.g., as brief as a one-night stand) and associated with lower levels of commitment and fewer expectations (e.g., emotional or

financial) (Nelson et al., 2011). If the meaning of the casual partnership is mainly defined as someone to have sex with or a relationship that otherwise involves limited social investment, casual partners play a lesser role in a person's life, thereby allowing for acceptable condom use proposals and negotiations. Condom use in casual partnerships is more likely than in steady partnerships (Nelson et al., 2011). A commonly shared characteristic of casual partners is that sexual encounters with others are expected and accepted (Gorbach, Stoner, Aral, Whittington, & Holmes, 2002; Noar et al., 2012). Awareness that the partner may engage in sex with others whose sexual history is risky or unknown may serve as triggers for condom use (Hock-Long et al., 2013; Lescano et al., 2006; Macaluso et al., 2000). The situation becomes more complex when a casual sex partner is thought of as a possible steady partner. If so, condom use may be or become more difficult to negotiate (Gorbach et al., 2002).

Among casual partners, transactional or commercial sex partners may be distinguished as a separate category (Sterk, Elifson, & German, 2000). These are partnerships in which sex is traded for money, drugs, or other material needs. However, other than when there is a direct exchange of money and/or drugs for sex, the transactional nature may be difficult to determine. The literature on condom use with transactional partners is divided. Some researchers report higher intentions and actual condom use rates in such interactions. Other researchers found that transactional partners who have a long-standing arrangement act more like steady partners (Sterk, 1999) in that they are less likely to use condoms, whereas others did not find an impact on condom use (Reynolds et al., 2010; Von Haeften, Fishbein, Kaspryzk, & Montano, 2000).

A more in-depth exploration of the differences between steady and casual partners is beyond the scope of this paper. However, based on this brief overview, the main differentiating characteristics are a higher level of social support, higher expectations for non-sexual interactions, and a lower acceptance of sexual relationships with others for steady compared to casual partners (Furman & Shaffer, 2011). The theory of gender and power asserts that in combination with other partner-related characteristics, such as having a steady partner who is an injection drug user (IDU) or one who disapproves of condom use, women are often times at higher risk for exposure to HIV (Wingood & DiClemente, 2000). This frames the intent of this study to explore if partner type and other associated characteristics are related to condom use.

Drug Use

The disinhibiting influence of alcohol and other drugs often has been identified as an antecedent to sexual risk-taking, specifically to beliefs about inconsistent condom use being normative (Calsyn et al., 2013; LaBrie, Earleywine, Schiffman, Pedersen, & Marriot, 2005; Sterk, 1999; Von Haeften et al., 2000). However, the evidence is mixed with regard to this effect on condom use with differential effects by population group (Cooper, 2002; Weinhardt & Carey, 2000). Research also shows the importance of considering the nuances of drug and alcohol use and sexual risk-taking among specific groups (Scott-Sheldon et al., 2009). Findings on steady partners have shown that as the drug use of one or both partners become more prominent in the relationship, the level of sexual activity decreases, thereby shifting

the dynamics of their sexual risk-taking (Elifson, Klein, & Sterk, 2006; Lescano et al., 2006).

As applied to HIV risk, the theory of gender and power asserts that a drug-using steady partner represents an exposure to infection for women through risk due to IDU or by influencing the woman's own drug use and related behaviors (Wingood & DiClemente, 2000). The theory also states that a woman's own use is a behavioral risk factor for HIV, potentially due to increased unsafe sex or involvement in situations that place her at higher risk. Literature shows that drug use as a risk factor may also extend to men (Von Haeften et al., 2000).

Condom Use Self-Efficacy

Self-efficacy is defined as the confidence an individual possesses in overcoming barriers to enacting a behavior and his/her self-assurance in executing the behavior (Baranowski, Perry, & Parcel, 2002). It has been noted as the basis for the motivations and actions of people with regard to a number of behaviors (Bandura, 2004). To successfully negotiate condom use, it is important that individuals believe in their ability to use condoms effectively (Fisher & Fisher, 1992). DePadilla et al. (2011) theorized and found that behavioral risk factors, including condom communication self-efficacy, would predict condom use behavior. However, in a meta-analysis, self-efficacy for condom use was a stronger predictor of intentions to use condoms than actual condom use (Casey, Timmermann, Allen, Krahn, & Turkiewicz, 2009). Researchers have identified that positive attitudes toward condom use and greater confidence in one's ability to use condoms consistently, in various circumstances, correspond with higher levels of, and more consistent, condom use (DiIorio, Dudley, Soet, Watkins, & Maibach, 2000; Sheeran, Abraham, & Orbell, 1999). Overall, efforts to enhance condom use self-efficacy have been recognized as important when aiming to increase safer sexual behaviors, specifically in HIV risk reduction studies (DiIorio et al., 2000).

The theory of gender and power posits that a lack of self-efficacy is one of the most important risk factors for inconsistent condom use (Wingood & DiClemente, 2000). Conceptualized as greater self-efficacy and therefore a protective factor, condom use self-efficacy represents an important proximal factor to consider when understanding condom use under a variety of conditions, including with different partner types and in the context of substance use.

Gender

Exposures such as partner type, a partner's drug use, one's own drug use, and condom use self-efficacy may vary by gender. In qualitative and quantitative research, men as well as women have reported being less likely to use condoms with a casual partner as compared to a steady partner, perceiving condom use with the former as less emotionally challenging (e.g., the fear of being accused of not trusting the partner or asking to do so because of sexual activity with others) (Noar et al., 2012; Von Haeften et al., 2000). Major differences in gender role expectations emerge when exploring if men or women should initiate condom

use negotiations and/or provide condoms (Noar et al., 2012). Gender stereotyping results in holding women more than men accountable for both starting the conversation about safer sex as well as providing the means, a condom (Amaro, 1995; Sterk, 1999). It is important to recognize such gender-based disparities in condom use negotiations (Calsyn et al., 2013; East, Jackson, O'Brien, & Peters, 2007; Woolf & Maisto, 2008). Findings from general population studies showed condom use self-efficacy to be higher among women than among men (Dekin, 1996; O'Leary, 1992; Parsons, Halkitis, Bimbi, & Borkowski, 2000) and that such self-efficacy was a stronger predictor of condom use intentions with main partners for women compared to men (Rhodes, Stein, Fishbein, Goldstein, & Rotheram-Borus, 2007).

The Present Study

This study was guided by the domain of the sexual division of power as presented in the theory of gender and power, a framework that emphasizes background risk or exposures such as sex partner type combined with partner drug use status and the behavioral risk and protective factors of one's own drug use status and self-efficacy for condom use (Wingood & DiClemente, 2000). In addition to filling a void in HIV risk behavior research through the study of CCU across different partner types, we also contribute to the literature by applying concepts from the theory of gender and power to a non-institutionalized community-based sample of African American adults who reside in disadvantaged urban neighborhoods. Demographic characteristics such as age (Chatterjee, Hosain, & Williams, 2006), employment status (Buchacz et al., 2001), educational attainment (Buchacz et al., 2001), stable living condition (Elifson, Sterk, & Theall, 2007; Ober et al., 2011), relationship status (DePadilla, Elifson, & Sterk, 2012), parental status (Cabral, Pulley, Artz, Brill, & Macaluso, 1998) and using alternatives to condoms such as oral contraceptives or tubal ligation (Noar et al., 2012) were included as control variables. In this study, we examined (1) the prevalence of CCU with steady and casual partners in a community-based sample of urban African American adults in the Southern U.S. whose behaviors place them at risk for HIV and (2) the factors associated with CCU in this population. Finally, to examine the potential power differential that reduces women's ability to protect themselves from HIV (Connell, 1987; Wingood & DiClemente, 2000), the hypothesis that gender moderates the associations of partner type, drug use status and condom use self-efficacy on condom use was tested.

Method

The data for this paper were collected as part of *Be Healthy*, a larger longitudinal study of multi-level factors related to health in disadvantaged neighborhoods in a major Southeastern metropolitan. Here we present only the baseline data collected between January 2010 and October 2011. Eligibility criteria were being 18 years or older, self-identifying as African American or black, and having lived for the past 12 months prior to the interview in one of the 61 census block groups (CBGs) that comprised the study area. CBGs are small geographic areas, viewed as a suitable neighborhood proxy, for which the U.S. Census collects and provides data (US Census Bureau, 2000). The study CBGs were selected based on social, economic and health indicators to address the *Be Healthy* study objectives, including aims to investigate the intersection between individual and neighborhood characteristics. Based on the disproportionate impact of the HIV/AIDS epidemic on African

Americans/blacks, including in the study's metropolitan area, enrollment was limited to African Americans/blacks. Two additional inclusion criteria for this paper were having reported vaginal sex at least one time in the past 90 days and having tested HIV-negative as part of the study protocol. This resulted in an eligible sample of 1,357 individuals.

Active street outreach, passive recruitment strategies such as the posting of flyers, and referrals by previous participants were used to recruit respondents. Non-probability quota sampling was employed to ensure sufficient variability by age, gender, and illicit drug use (i.e., use of crack, powder cocaine, heroin, and methamphetamine in the past 90 days). Trained interviewers administered computer-assisted surveys in private rooms at a local research site. The questionnaire included questions on social-demographic characteristics, reproductive health, recent sexual activity, including partner type and condom use, and substance use. Participants were compensated $30 for their time (one to two hours). The Emory University Institutional Review Board approved the study protocol.

Measures

Outcome Variable

The main outcome variable, the proportion of condom use, was calculated by dividing number of vaginal sex acts during which a condom was used by the total number of vaginal sex acts in the past 90 days. The interval of 90 days was chosen because of previous research findings on the reliability of this time frame (Napper, Fisher, Reynolds, & Johnson, 2010; Noar, Cole, & Carlyle, 2006). Subsequently, proportions of 1.00 were coded as CCU (1) and proportions less than 1.00 were coded as inconsistent condom use (0). For each participant, CCU was measured for two types of partners, defined as steady and casual partners. Given the low number of participants reporting acts with paid or paying partners, these partners were included as casual partners. This is consistent with the categorization applied to non-steady relationship partners (e.g., friend, recent or new acquaintance, or transactional sex partner) in an analysis of the National Survey of Sexual Health and Behavior (Reece et al., 2010). Analyses excluding paid/paying partners did not show differing results from those including these as casual partners.

Demographics

Age was measured in years and treated as a continuous variable. *Gender* was coded as female (1) and male (0). *Employment* was categorized as employed, full or part-time (1) and unemployed (0). *Education* was measured as years of school. *Stable living situation* was conceptualized as owning or renting one's own home (1) and other living situations (0). *Relationship status* was assessed as being in a relationship and living together (1), being in a relationship and not living together (2), and not being in a relationship (0). *Caretaker* described whether participants had caregiving responsibilities for children age 18 or younger (1) or did not have such responsibilities (0). *Alternative contraception* was coded as (1) if the participant reported using the pill, an intra-uterine device or a diaphragm in the past 90 days, if they reported a hysterectomy or a vasectomy, or if they reported being currently pregnant and coded as (0) if they reported none of those contraceptive options. *Multiple sex partner*

status was categorized as having had more than one sex partner (regardless of type of partner or sex act) in the past 90 days (1) and having had one sex partner in the past 90 days (0).

Independent Variables

Illicit drug use assessed whether the participant had used crack cocaine, powder cocaine, methamphetamine or heroin in the past 90 days (1) or had not used any of these substances during that time period (0). Sex partner illicit drug use was defined as having had a sex partner in the past 90 days whom the participant described as a drug user (1) and not having had a sex partner known to be a drug user in the past 90 days (0). These two variables were combined into a four-level variable of *self/sex partner use* where neither the participant or any sex partners were drug users (0), only the participant was a drug user (1), at least one sex partner was a drug user (2) and both the participant and any sex partners were drug users (3). This variable was also computed separately for steady and casual partners in models that only included sex with a single partner type.

Condom use self-efficacy was assessed using selected items from Brafford and Beck's (1991) Condom Use Self Efficacy Scale (Brafford & Beck, 1991). In this study, we used 13 items to create an overall scale measuring condom use self-efficacy, with individual items scored using a 5-point Likert scale with responses ranging from “strongly disagree” (coded 1) to “strongly agree” (coded 5). The items included measurements of both general and new partners and specific to the confidence in purchasing condoms, remembering to use condoms in different circumstances, suggesting condom use with partners, and persistence in one's efforts to use condoms. Scores ranged from 13 to 52, with higher scores representing higher levels of reported condom use self-efficacy (Cronbach's alpha = .81).

Statistical Analyses

All analyses were conducted using IBM SPSS Statistics 20. CCU was examined among all participants, with CCU coded as with steady partners and with casual partners. In the separate models for steady partners and casual partners it was possible that a participant reported only one type of partner; therefore, only a portion of the sample were included in these models. Given the clustered nature of the data (i.e. by participant and by census block group), generalized estimating equations (GEE) were applied across these models to control for the correlation between observations. Preliminary crude associations with CCU for each partner type were tested using bivariate binomial regressions with a logit link. Given the unknown nature of the clustering, separate analyses of CCU for steady and casual partners applying independent and exchange correlation matrices were tested (Kleinbaum, Kupper, Nizam, & Muller, 2008; Ziegler & Vens, 2010). Exchange was applied as there was no substantive difference in results between the two matrices. Control variables significant at the level of $p < .10$ were included in multivariable models of CCU outcomes; one with CCU for steady partners only and one with CCU for casual partners only. Finally, interaction terms consisting of gender by self/sex partner use were entered into multivariate models predicting CCU for steady and casual partners.

Results

Sample Description

As shown in Table 1, CCU was 23% for vaginal sex with steady partners and 56% for vaginal sex with casual partners. The mean age of the sample was 37.01 (*sd* = 13.12 years) and less than one-half were female (44%). Approximately one-fourth of the respondents were employed (26%), and on average participants had completed 12.4 years of school (*sd* = 2.20). Slightly over one-half owned or rented their home (55%). Forty-three percent of participants reported that they were not partnered or in a relationship. Equal percentages (28%) reported being partnered and living with this partner or being partnered and not living together. One-fourth of the sample (24%) reported having caretaking responsibilities for at least one child under the age of 18.

Two-fifths of the sample reported having more than one sex partner in the past 90 days. The percentage was higher for those who reported having casual partners (77%) compared to those who reported steady partners (31%). Of those who reported having steady partners, 23% also reported casual partners and among those reporting casual partners, 37% also reported steady partners. Sixteen percent of the total sample (*n* = 222) reported having both steady and casual partners and were therefore represented in both sub-samples addressing a single partner type. Less than one-third of the sample reported illicit drug use (28%), with a lower percentage of drug use among those reporting steady partners (24%) as compared to those reporting casual partners (39%). One-half of the sample reported drug-using sex partners in the past 90 days, with these being less common among those reporting steady partners (39%) than among those reporting casual partners (62%). Partnerships in which neither partner used drugs were more common among those reporting steady partners (50%) than among those reporting casual partners (30%). Those partnerships in which both partners used drugs were more common among those reporting casual partners (31%) than those reporting steady partners (13%). Mean condom use self-efficacy was similar across partner type sub-samples (steady: mean = 39.68, *sd* = 6.29; casual: mean = 39.51, *sd* = 6.30).

Crude Associations

In bivariate models of CCU for steady partners, older age, being female, and being partnered regardless of living situation were associated with decreases in CCU (see Table 2). Having more than one sex partner was associated with an increase in the odds of CCU with steady partners. Only older age was associated with a decrease in CCU with casual partners. Being partnered and living together compared to not having a partner was associated with an increase in the odds of CCU with casual partners.

Participant non-drug use and sex partner drug use compared to neither the participant or the partner being a drug user was associated with a decrease in the odds of CCU with steady partners. Reporting that both the participant and at least one sex partner were drug users compared to neither being users was associated with decreases in the odds of CCU with both steady and casual partners. Condom use self-efficacy was positively associated with an increase in the odds of CCU for both partner types.

Table 2 also includes crude models that account for the possibility of each participant having both casual and steady partners. Sex with casual partners compared to steady partners was associated with increases in the odds of CCU. Younger age, being female, being partnered regardless of living situation, and having children under the age of 18 living at home were associated with reductions in the odds of CCU. Having more than one sex partner in the past 90 days was associated with an increase in the odds of CCU. Reporting that both they and at least one sex partner were drug users compared to neither being users was associated with a decrease in the odds of CCU. Condom use self-efficacy was associated with an increase in the odds of CCU.

Initial Moderation Analysis

The role of gender in moderating the associations between partner type, drug use status, condom use self-efficacy, and CCU also was explored. As shown in Table 3, the percentage of women reporting CCU was less than that for men (31% versus 39%). For steady partners, men reported higher CCU (26%) than women (21%). Among those who reported that they used drugs, the percentage of women reporting CCU (45%) was higher than men (31%), whereas among those with only sex partner drug use, women reported CCU (25%) at a lower percentage than men (48%). In cases where both the participant and a sex partner were drug users, 23% of women reported CCU compared to 34% of men. To compare differences in CCU across gender by condom use self-efficacy, a median split was performed. A lower percentage of women reported CCU among those above (38%) and below (18%) the median condom use self-efficacy score compared to men (above: 47%, below: 38%).

Table 3 also displays CCU for gender by drug use and gender by condom use self-efficacy for both steady and casual partners. The percentage reporting CCU was slightly lower for men than women when neither partner used drugs, both for steady (26% for men versus 29% for women) and casual partners (65% for men versus 70% for women). Additionally, a greater percentage of men compared to women reported CCU when a sex partner but not themselves was a drug user. This difference was much greater for steady partners (33% versus 11%) compared to casual partners (62% versus 57%).

Multivariable Models

Separate multivariable models for CCU for steady and casual partner types are displayed in Table 4. Additionally, Table 4 exhibits models with gender by self/sex partner use interactions predicting CCU for steady and casual partners. Only the interaction between drug use and gender was significant and this was true only for steady partners. Therefore, the interaction model is described for steady partners and the main effect model is described for casual partners. Being partnered and living together and being partnered and not living together were associated with decreases in the odds of CCU compared to not having a partner in the model of CCU with steady partners (*OR*: 0.54, $p < .01$, *OR*: 0.17, $p < .001$). This was not the case in the model of CCU with casual partners, which showed an increase in the odds of CCU for those partnered and living together (*OR*: 1.71, $p < .05$). In the model of sex with steady partners, once the interaction term was included, having a sex partner who used drugs compared to neither the participant nor their sex partners being users was associated with a significant decrease in the odds of CCU but only for women (*OR*: 0.23, *p*

< .01). In the model of sex with casual partners, being a drug user and having a sex partner who was a drug user was associated with a decrease in the odds of CCU (*OR*: 0.45, $p < .01$). Finally, condom use self-efficacy was associated with increased odds of CCU in the models of sex with steady partners (*OR*: 1.07, $p < .001$) and sex with casual partners (*OR*: 1.10, $p < .001$).

Discussion

This objective of this study was to investigate risk factors from the domain of the sexual division of power within the theory of gender and power (Connell, 1987; Wingood & DiClemente, 2000) in order to predict CCU. Consistent with the theory of gender and power, having a steady partner was associated with decreased odds of CCU and higher condom use self-efficacy was associated with increased odds of CCU. However, at odds with the theory, these associations were not moderated by gender. Research generally indicates that condom use does tend to be lower with steady partners, often justified by perceptions that condoms create emotional and physical distance and challenge the meaning of the relationship (Bernstein et al., 2013; Corbett et al., 2009; Nelson et al., 2011). The theory of gender and power asserts that having a steady partner who does not want to use condoms represents a background risk for STDs, including HIV. Research findings with casual partners has been less consistent, but has indicated that condom use with casual partners may be more common than what is reported with steady partners (Gorbach et al., 2002; Hock-Long et al., 2013; Lescano et al., 2006; Macaluso et al., 2000; Noar et al., 2012). Findings from this study also showed CCU to be reported more frequently with casual than steady partners. However, although more men reported CCU with steady partners, the difference was not statistically significant and the likelihood of condom use with casual partners was equivalent across genders. Thus, these relationship labels appeared to have a similar association with condom use for men and women in this sample although there are potentially subsets of steady and casual partners associated with different barriers to condom use (Kapadia et al., 2007).

It is noteworthy that two-fifths of the current sample reported having more than one sex partner in the past 90 days. Further, nearly one-third of those reporting a steady partner during that same time period reported more than one sex partner. Although reporting multiple partners was associated with an increase in condom use, such a large percentage makes it more difficult to include monogamy as one of the meaningful aspects of steady partnerships that differentiates them from other kinds of partnerships. This is important because the absence of monogamy may not always prompt condom use. Even though having multiple partners was associated with a slight but non-significant increase in the odds of condom use in the model of CCU by partner type, previous research has found that even when people report that they or their partners have other partners, condom use is not consistent (Brady, Tschann, Ellen, & Flores, 2009; Ober et al., 2011).

The theory of gender and power asserts that having a high-risk partner increases a woman's background risk for HIV. In terms of drug use, the theory defines the risk as imparted by the man's IDU or the man's influence on the woman's drug use or means of procuring drugs, such as through prostitution (Wingood & DiClemente, 2000), with the latter creating

behavioral risk and possibly additional exposure to drugs. The current study found that having a drug-using partner while not being a drug user oneself was associated with decreased odds of condom use, but only for women. Having a drug-using partner was another exposure for inconsistent condom use in this study and the risk was realized in two ways. Both the participant and their partner being drug users compared to neither using drugs was associated with a reduction in the odds of CCU for casual partners. In contrast, having only a partner using compared to neither using was associated with a reduction in the odds of CCU for steady partners. Moreover, the interaction between gender and drug use was significant and reduced the influence of partner use to non-significance, indicating that only having a partner who used drugs was associated with the reduction in the odds of CCU for women. The literature shows that substance use may reduce condom use (LaBrie et al., 2005; Lescano et al., 2006; Von Haeften et al., 2000) and that women reported slightly lower condom use rates compared to men in the general population (Reece et al., 2010). Hence, women who reported a drug-using male partner were posited in the theory of gender and power as creating background risk for HIV through IDU or behavioral risk by influencing the woman's drug use (Wingood & DiClemente, 2000). Findings from the present study show that condom use is markedly lower not only when the woman and her partner use drugs, but also when only the woman's partner uses, suggesting a link between the exposure of general partner drug use and condom use for women. A possible reason for this finding is that women are typically responsible for condom use and must initiate and negotiate condom use within relationships. When a partner is using drugs they may be more difficult to negotiate condom use with and less open to reasoning (Allen, Emmers-Sommer, & Crowell, 2002). These findings represent an extension of the risk for HIV for women beyond the risk conveyed by a partner's IDU status to include the association that having a drug-using partner has on CCU among women.

The risk created by a male steady partner's drug use may be embedded in the context of the relationship rather than the act, similar to condom use in steady relationships more generally (De Visser & Smith, 2001), and may also be more difficult to address in sexual risk reduction interventions. Given that among drug users the partner's beliefs about condoms have been shown to be predictive of condom use with steady partners but not casual partners (van Empelen, Schaalma, Kok, & Jansen, 2001), it would follow that the beliefs of a drug-using partner may also be more important in steady relationships even when one person is not a user. The majority of participants who were drug users in this study used cocaine and this may have been true of their sex partners. Men and women have demonstrated differential responses to the relationship between cocaine use and sexual behavior, with men showing a stronger link between cocaine and sexual desire and a greater percentage of men than women endorsing the statement that they would be more likely to practice risky sex under the influence of cocaine (Rawson, Washton, Domier, & Reiber, 2002). Men who use cocaine are also more likely to report perpetrating intimate partner violence (Stuart et al., 2008), which is associated with reduced condom use among women who have been victimized (Wu, El-Bassel, Witte, Gilbert, & Chang, 2003).

Another important finding was that condom use self-efficacy was consistently associated with an increase in the odds of CCU regardless of partner type and was not moderated by gender. Myriad empirical research supports this finding and it represents an important target

for interventions (DiIorio et al., 2000; Sheeran et al., 1999). However, although the scale used in the study included questions about self-efficacy for condom use when the participant was under the influence of alcohol or drugs, it did not assess self-efficacy for condom use when the participant's sex partner was under the influence of alcohol or drugs; this may be important to understand, particularly for women.

A finding not linked to the theoretical framework described in this study was that living with a partner had a positive influence on CCU with casual partners and a negative influence on steady partners. Partners who live together may be receiving financial help from one another, especially in the case of steady partners, and this has been associated with reduced condom use (Brady et al., 2009). It is also plausible that perceived relationship security may be lower for those who are not cohabitating, which may in turn contribute to a reluctance to negotiate condom use. This is a component of disparity in HIV risk between genders addressed in the sexual division of labor within the theory of gender and power (Wingood & DiClemente, 2000). However, we could not examine whether this was different across men and women because a limitation of the cohabitation measure was that it did not specify across partner types and numbers. The positive influence of living with a partner on CCU among casual partners may be because the relationship being described was not with the casual partner but rather with a steady partner and this resulted in greater condom use outside of the steady relationship.

This study had several limitations. The data were cross-sectional and causal inferences could not be made. Participants' self-reported sensitive information about drug use and sexual behavior may have been subject to social desirability bias as well as recall bias. However, the interviewers were trained to survey such topics and we have no reason to believe that there was deliberate misreporting. A related issue that may have influenced the results was that participants were paid $30 for their participation. However, while $30 USD was sufficient for recruitment, it was on the low end of the scale for ongoing local studies among similar samples.

Collapsing casual with paid or paying partners due to sample size precluded comparisons across these types of partnerships. Additionally, even with this categorization, the sample was not large enough to examine a gender by partner type by drug use status interaction that may have been useful given the descriptive statistics in Table 3. For those with more than one partner, the way that relationship status was measured did not allow us to identify the sex partner that was being described in the relationship status variable. A related issue is that in some cases, it was not clear if vaginal sex occurred with all partners for participants coded as having more than one partner. The sample was purposive and generalizability is limited to resource-poor urban neighborhoods. Additionally, the methods of recruitment preclude an assessment of the representativeness of the sample based on non-response. A strength of the study was that the population was not limited to those seeking drug treatment, providing access to a hard-to-reach group of users for comparison with non-users.

Conclusion

Findings from this study supported the importance of the domain of the sexual division of power within the theory of gender and power, by demonstrating the link between partner-related exposures such as partner type and condom use as well as the association between drug use and condom use self-efficacy and condom use. Partner-related exposures related to drug use (Wingood & DiClemente, 2000) were extended to include the risk of reduced condom use for women who were not drug users but had drug-using sex partners. Thus, interventions intended to empower women need to expand beyond acknowledging the reduced control that women who use drugs demonstrate (Sterk et al., 2000) to include those who only have drug-using sexual partners but do not use drugs themselves. Finally, although condom use self-efficacy demonstrated a consistent protective association across partner types, the finding that condoms were used much less consistently with steady partners across all drug-using scenarios, and despite a high prevalence of multiple partnerships, was of concern even though it is consistent with previous research (Bernstein et al., 2013; Corbett et al., 2009; Hock-Long et al., 2013; Nelson et al., 2011). These results indicate that more research is required to understand how safer sexual behaviors can be enacted in the context of relationships that may be defined by trust and commitment.

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Table 1

Descriptive Statistics For the Overall Sample and by Partner Type

Variable Name	**All N = (1,357)** ***(mean (sd)/ %)***	**Steady N = (980)** ***(mean (sd)/ %)***	**Casual N = (599)** ***(mean (sd)/ %)***
Consistent condom use	31%	23%	56%
Demographics			
Age	37.01 (13.12)	36.00 (12.90)	37.99 (13.29)
Gender (female)	44%	48%	33%
Employed	26%	26%	25%
Education	12.36 (2.20)	12.35 (2.17)	12.39 (2.27)
Stable Living Situation	55%	56%	51%
Relationship Status			
Not Partnered	43%	28%	68%
Partnered and living together	28%	34%	21%
Partnered and not living together	28%	38%	11%
Caretaker	24%	28%	17%
Alternate contraception	33%	35%	29%
More than one sex partner	40%	31%	77%
Self/sex partner drug use			
Neither used drugs	42%	50%	30%
Only participant used drugs	8%	11%	08%
Only partner used drugs	30%	26%	31%
Participant and partner used drugs	20%	13%	31%
Condom use self-efficacy	39.73 (6.24)	39.68 (6.29)	39.51 (6.30)

Table 2

Crude Associations with Consistent Condom Use (CCU)

Variable Name	Steady CCU N = 980 *OR* (95% C.I.)	Non Steady CCU N = 599 *OR* (95% C.I.)	CCU Across Partner Types N = 1579 *OR* (95% C.I.)
Partner type			
Casual versus steady			4.25 (3.46, 5.24)***
Demographics			
Age	0.98 (0.97, 0.99)***	0.98 (0.97, 0.99)***	0.98 (0.98, 0.99)***
Gender (female)	0.74 (0.58, 0.94)*	0.99 (0.69, 1.41)	0.70 (0.56, 0.86)**
Employment	0.91 (0.64, 1.29)	1.53 (0.86, 1.81)	0.99 (0.78, 1.26)
Education	1.00 (0.93, 1.07)	1.03 (0.96, 1.11)	1.01 (0.96, 1.06)
Stable living situation	0.93 (0.73, 1.19)	0.88 (0.65, 1.18)	0.83 (0.68, 1.03)+
Relationship status[a,b]			
Partnered and living together	0.66 (0.46, 0.95)*	1.84 (1.25, 2.71)**	0.69 (0.54, 0.89)**
Partnered and not living together	0.19 (0.13, 0.29)***	1.00 (0.57, 1.77)	0.21 (0.16, 0.29)***
Caretaker	0.87 (0.63, 1.19)	1.05 (0.64, 1.71)	0.74 (0.57, 0.96)*
Alternate contraception	0.93 (0.63, 1.38)	1.06 (0.70, 1.60)	0.90 (0.72, 1.13)
More than one sex partner	1.48 (1.06, 2.08)*	0.74 (0.55, 1.00)+	2.04 (1.65, 2.52)***
Self/sex partner drug use[b,c]			
Only participant used drugs	0.75 (0.46, 1.21)	1.04 (0.59, 1.86)	1.07 (0.72, 1.59)
Only partner used drugs	0.60 (0.40, 0.89)*	0.80 (0.55, 1.15)	0.98 (0.76, 1.25)
Participant and partner used drugs	0.52 (0.35, 0.79)**	0.34 (0.23, 0.50)***	0.73 (0.54, 0.97)*
Condom use self-efficacy	1.07 (1.04, 1.10)***	1.11 (1.07, 1.14)***	1.07 (1.06, 1.09)***

+ $p < .10$

* $p < .05$

** $p < 0.1$

*** $p < .001$

[a] Reference category is Not partnered

[b] Self/sex partner use becomes significant for multiple outcome CCU when controlling for partner type

[c] Reference category is Neither used drugs

Table 3

Condom Use Proportions By Gender and Partner Type, Self/Sex Partner Drug Use Status and Condom Use Self-Efficacy (Partner Type within Participant CCU, N=1579)

Variable	Male CCU %	Female CCU %
All acts	39	31
Partner type acts		
Steady n = 980	26	21
Casual n = 599	56	56
Self/sex partner drug use all acts		
Neither used drugs	38	37
Only participant used drugs	31	45
Only partner used drugs	48	25
Participant and partner used drugs	34	23
Condom use self-efficacy below median	28	18
Condom use self-efficacy above median	47	38
Steady partners		
Self/sex partner drug use		
Neither used drugs	26	29
Only participant used drugs	16	32
Only partner used drugs	33	11
Participant and partner used drugs	19	14
Condom use self-efficacy below median	17	12
Condom use self-efficacy above median	33	26
Casual partners		
Self/sex partner drug use		
Neither used drugs	65	70
Only participant used drugs	57	75
Only partner used drugs	62	57
Participant and partner used drugs	43	35
Condom use self-efficacy below median	43	36
Condom use self-efficacy above median	65	65

Table 4

Single Outcomes By Partner Types

Variable	Steady (N=962) *OR* (95% C.I.)	Interaction Term Added *OR* (95% C.I.)	Casual (N=587) *OR* (95% C.I.)
Age	0.99 (0.97, 1.00)	0.99 (0.97, 1.00)$^{+}$	1.00 (0.98, 1.01)
Gender (female)	0.82 (0.63, 1.08)	1.07 (0.68, 1.67)	
Stable Home			
Relationship status[a]			
Partnered and living together	0.54 (0.37, 0.80)**	0.54 (0.37,0.80)**	1.71 (1.10, 2.66)*
Partnered and not living together	0.19 (0.12, 0.29)***	0.17 (0.11, 0.28)***	1.34 (0.72, 2.48)
More than one partner	1.24 (0.84, 1.82)	1.19 (0.79, 1.77)	0.96 (0.64, 1.43)
Self/sex partner drug use[b]			
Only participant used drugs	1.03 (0.56, 1.91)	0.60 (0.30, 1.17)	1.30 (0.65, 2.57)
Only partner used drugs	0.54 (0.34, 0.84)**	1.12 (0.62, 2.01)	0.76 (0.50, 1.16)
Participant and partner used drugs	0.70 (0.42, 1.16)	0.83 (0.46, 1.50)	0.45 (0.28, 0.74)**
Gender × self/sex partner drug use			
Only participant used drugs * Female		2.84 (0.95, 8.48)$^{+}$	
Only partner used drugs		0.23 (0.10, 0.54)**	
Participant and partner used drugs * Female		0.71 (0.28, 1.78)	
Condom use self-efficacy[c]	1.07 (1.04, 1.11)***	1.07 (1.04, 1.11)***	1.10 (1.06, 1.14)***

$^{+}p < .10$

$^{*}p < .05$

$^{**}p < 0.1$

$^{***}p < .001$

[a] Reference category is Not partnered

[b] Reference category is Neither used drugs

[c] Interaction term with Self/sex partner drug use; interaction term with Condom use self-efficacy was not significant for any group