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Multiple Sexual Partnerships in a Sample of African-American Crack Smokers

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Abstract

The sample for this study consisted of 692 sexually active African-American crack cocaine users living in Houston, TX who reported more than one sexual partner in the previous 30 days. Participants were asked to describe each of their two most recent partners from a list of eight choices: spouse/like a spouse/lover; close friend/friend/acquaintance/customer you like/customer. Analyses were conducted on the 1,384 partners and 692 partnership combinations reported. Partnerships and partnership patterns were examined with respect to three risk behaviors—unprotected sex, alcohol use to accompany sex, and drug use to accompany sex—and with respect to three affective measures—partner intimacy, condom use responsibility, and condom use self-efficacy. Results indicate that while many partnerships were based on trading sex for money or drugs, many participants reported partners they considered a spouse or friend. Risk behaviors and affective measures were found to differ by partner type.

Keywords

Crack use; Condom use; Multiple sex partnerships; African-Americans

Introduction

Other factors equal, engaging in multiple sexual partnerships during the period a given individual is infective can increase the spread of an STD in a particular population. The risk of transmission to those partners can be reduced by the consistent use of condoms. However, several studies have found condom use varies by partner type (Cooper and Orcutt 2000; Friedman et al. 2002; Lansky et al. 1998; Macaluso et al. 2000; Williams et al. 2001). Rates

of consistent condom use have generally been found to be lower with main or long-term partners and higher in new or casual partners and with commercial partners.

Multiple partnering and non-condom use have been associated with the use of crack cocaine (Adimora et al. 2003; Flom et al. 2001; Friedman et al. 2002; Rothenberg et al. 2000). Crack use can lead to intense sexual desires and loss of inhibitions (McCoy and Inciardi 1995). Crack users are often marginalized in terms of education, earnings, and housing (Rasch et al. 2000). Baseman et al. (1999) proposed that many short and long-term sexual relationships among crack smokers are predicated on the supply of drugs for sex and sex for drugs, and that both drugs and sex form part of an underground economy in urban, minority communities. In a study of crack using women, Hoffman et al. (2000) found more frequent and intense use of crack to be associated with greater numbers of sex partners, larger numbers of drug-injecting sex partners, greater frequency of sex while high on alcohol or other drugs, trading sex for money or drugs, and unprotected sex. Inciardi (1995) studied male and female crack users who exchanged sex and found participants had high numbers of anonymous partners and unprotected sex.

While many crack smokers do not form traditional sexual relationships and many engage in trading, not all of their relationships involve trading partners. In Williams et al.'s (2001) study, 199 African-American crack users described 492 partners (each participant could describe up to three partners from the 30 days preceding their interview). Twenty-one percent of partners were described as primary partners, 41% as casual partners, and 37% as commercial partners. Timpson et al. (2003) studied 137 HIV-positive African-Americans, 97% of whom were current crack smokers. Fifty-nine percent of participants had a primary partner in the 30 days before their interview, and 57% had a casual partner. Williams (unpublished) studied 98 male sex workers, 98 % of whom had smoked crack in the previous 30 days. These men described their three most recent partners during that time (284 total partners). Forty-four percent of partners were described as an intimate partner, 35% as a friend or acquaintance, and 21% as a paying customer.

Potential affective and cognitive precursors of condom use have also been studied. Williams et al. (in press), using data from the same study as here, found that a sense of personal responsibility to use condoms had an impact for both men and women's intention to use condoms the next time they had sex with their recent sex partners. Condom use intention was higher for those participants whose sense of personal responsibility was high. In Williams's (unpublished) study of male sex workers, a measure of feelings of affection towards a partner (based on trust, desire, and attraction) was negatively associated with the intention to use condoms with that partner in a main effects model. Affection was related to the type of partner and was higher with main partners than with casual. A measure of condom use self-efficacy was positively, but not significantly, associated with the intention to use condoms.

Multiple partnerships are common in crack users, and users can form intimate, as well as casual or commercial, partnerships. Consistent condom use in multiple partnerships could be affected to the degree that behavioral and affective variables differ between different type partners or between partners of the same type. This study presents results of interviews conducted with 692 sexually active African-American crack smokers reporting multiple sex partners in the 30 days prior to their interview. Participants were asked to describe their relationship to each of their two most recent partners using one of eight possible choices. Participants were also asked about their behaviors with each partner regarding condom use and alcohol and drug use to accompany sex. Affective measures were also derived regarding participants' feelings of intimacy towards each partner and sense of condom use responsibility and condom use self-efficacy with regard to each partner. Data were thus available for the 1,384 partners described and for the 692 resulting partnership pairs. We were interested in examining the following

questions. What was the distribution of relationship types for each of the 1,384 partners and the 692 partnership pairs? How would the behavioral and affective variables differ by partnership type? To what extent did these measures differ within partnership pairs, particularly when each partner was described similarly? Would findings vary by gender?

Methods

Data for this study were collected as part of a condom use intervention study being conducted with African-American heterosexual crack smokers residing in Houston, Texas. Data for the analyses reported here were from baseline interviews conducted between May 2002 and March 2005. Participants were required to self-identify as African-American; be between 18 and 40 years old; to have smoked crack cocaine in the 48 hours before being screened; to have had vaginal sex at least once in the 7 days before being screened; to reside at the time of screening in one of the neighborhoods targeted for recruitment; and to provide sufficient information to allow recontact for follow-up interviews. All procedures and data collection forms for the study were reviewed and approved by university committees for the protection of human subjects.

Sampling

Individuals were recruited to participate in the study using a combination of targeted sampling and participant referral. A targeted sampling plan was developed to identify neighborhoods having high rates of drug use and confirmed through interviews with local key informants knowledgeable about patterns of illicit drugs use in the city (Watters and Biernacki 1989). Key informants were also asked to identify neighborhood places where crack smokers were likely to congregate and to provide introductions for the outreach workers. Upon meeting likely candidates for the study, outreach workers briefly described the research project to individuals who might qualify, provided them with a risk reduction packet that included condoms, and asked if they were interested in taking part in a health-related study. If persons were interested, the outreach worker gave them business cards and asked them to go to the nearby data collection office for screening.

Individuals presenting for screening were informed of the intent of the study; that their participation was voluntary; that they could refuse to answer any question; and asked for their verbal consent to be screened. Individuals were screened for eligibility using a brief questionnaire covering eligibility criteria. Individuals who met the criteria were read a consent form and asked to sign it and to provide a urine sample. The sample was tested for cocaine metabolites using the OnTrack TesTstik[®] test (Varian, Inc., Lake Forest, CA). If a urine sample was negative, the individual was asked to defer participation until a later time. Once written informed consent was obtained, participants were interviewed. Participants were paid \$25 for their time and travel expenses.

Screening information was available from a total of 1,114 individuals interviewed between May 2002 and March 2005. Of these, 778 were eligible. The most common reasons for disqualification were not being sexually active (58%), not being an active crack user (11%), not testing positive for cocaine (8%), and being judged “not believable” by research staff (7%). Fifteen percent were disqualified for “other” reasons.

Measures

Data were collected in private offices by trained research assistants using the Peer Outreach Questionnaire (PRQ). The questionnaire took about one hour to complete. The PRQ was developed based on instruments used in previous studies of drug using populations. Darke’s review of the literature (Darke 1998) found drug users’ reported behaviors to be reliable and valid based on statistical tests and objective data such as urine and hair testing and more

subjective measures of partner agreement. Johnson et al. (2000) studied measures similar to those in the PRQ in a multi-site study of out of treatment drug users. Analyses of 48-h test-retest results showed users' reports of drug use and sexual behaviors to be reliable and urine tests confirmed reported drug use. Forty-eight hour test-retest data generated by a sample of 50 individuals matching study criteria showed that the PRQ produces reliable data. Sociodemographic variables from the PRQ used for this study were age, highest grade of school completed, marital status, homelessness, employment status, 30-day income, and HIV/AIDS status. Sexual behavior items included the total number of (vaginal) sex partners in the last 30 days and the number of times had sex during that period.

Respondents were asked about their most recent sexual partner and their next most recent partner (if any) in the 30 days before the interview. Respondents characterized each sexual relationship by choosing one of eight relationship categories: spouse, like a spouse, lover; close friend, friend, acquaintance; customer you like, customer. For this study, relationship was collapsed into three categories: spouse/like a spouse/lover ("spouse"); close friend/friend/acquaintance ("friend"); customer you like/customer ("customer"). Each participants' joint relationship to their partners could thus be classified using six combinations: each partner thought of as a spouse, each as a friend, each as a customer, one as a spouse and one as a friend, one as a spouse and one as a customer, and one as a friend and one as a customer.

Condom use with each partner was measured by asking respondents if a condom was used the last time they had sex with that partner. Respondents were asked if they used alcohol before or during sex the last time they had sex with a partner. A similar question was asked for drug use with sex. These items were then scored to indicate whether a participant had used condoms, alcohol, or drugs with both partners, with only one partner, or with neither partner.

Participants were asked whether the most recent sexual encounter with a partner was the first time they had sex with that person. If not a first time encounter, respondents were asked how long they had been in a sexual relationship with the partner. For this study, first time relationships were assigned a length of relationship of 30 days.

A partner intimacy scale was used to assess participants' feelings towards each of their two most recent sex partners. The scale consisted of nine items related to feelings of trust in the partner, partner attractiveness, regard for the partner's wishes, and the desire to have sex with that partner again. For the final study sample as described below, Cronbach's $\alpha = 0.88$ for intimacy with the first partner and .91 for the second. A situational condom use self-efficacy scale consisting of 14 items was used to measure participants' confidence in being able to use a condom with a given partner given certain circumstances, for example, when they had had too much to drink. Cronbach's $\alpha = 0.96$ for self-efficacy with the most recent partner and .98 for the second partner. Condom use responsibility was measured by a single item regarding each partner, "I think we should use a condom every time we have sex." Each item for the partner intimacy scale and for condom use responsibility were scored from 1 = "strongly disagree" to 10 = strongly agree. Items for the self-efficacy scale were scored from 1 = "not at all confident" to 10 = "very confident." Each scale score was computed as the mean of item scores.

Analyses

Intake interviews were available from 815 persons (screening information as described above was unavailable for 37 cases (5%)). Four cases (<1%) were excluded from analyses due to lack of sexual activity and/or crack use in the previous 30 days as recorded in their interviews. Forty-eight cases (6%) were excluded due to inconsistent data (for example, reporting sexual activity in the last 7 days but none in the last 30 days). Thirteen participants 13 (2%) reported at least one of their two most recent sex partners was of the same gender as themselves or that they

were currently living with a sex partner of the same gender. Since the focus of this study was those in heterosexual relationships, these participants were omitted from the analyses. Of the remaining 750 respondents, 692 (92%) had two or more sex partners in the 30 days prior to their interview. Analyses were conducted on the interviews provided by these 692 participants.

Descriptive statistics were computed for the sociodemographic, sexual behavior, substance use, and condom use variables. The significance of differences in sample characteristics by gender was assessed using chi-square tests, independent sample *t*-tests, and one-way analysis of variance (with Scheffe's post-hoc test) as appropriate.

Next, the frequency of partnership types across the 1,384 partners was computed as well as the joint distribution of the two named partners. Analyses were conducted to address the following questions. Did condom use, alcohol use, and drug use vary significantly by partnership type? What percentage of participants engaged in behaviors with neither partner, with only one partner, or with both partners? Did partner intimacy, condom use responsibility, and condom use self-efficacy vary by partnership type? Were behaviors and affective measures consistent with each partner named by a participant when those partners were described similarly? Chi-square tests, paired-sample *t*-tests, and one-way analysis of variance were used as appropriate. Analyses were stratified by gender.

Results

Sample Characteristics

The sample consisted of 497 males (72%) and 195 females (28%). Characteristics of the sample are shown in Table 1. While there were statistically significant differences by gender with regard to age, marital status, and income, the majority of both males and females were in their 30's, were single, and reported income of less than \$600 in the 30 days prior to their interview. The majority of males had completed at least twelve years of school whereas the majority of females had not. The majority of males reported having had some employment in the 30 days prior to their interview while the majority of females were unemployed. Although the majority of participants did not consider themselves homeless, males were more likely than females to do so. The majority had not been diagnosed as HIV-positive, though females were more likely than males to report being diagnosed as HIV-positive. Most participants had never injected drugs and were not currently injecting drug. The majority had used crack, on average, at least once a day in the 30 days prior to their interview. Injection and crack use did not differ by gender.

Sexual Behavior

Participants had had an average of 9.7 (*SD* = 16.9, median = 5.0) sex partners in the 30 days prior to their interview. One-third of participants (35%) were trading sex for money, and one-quarter (27%) were trading sex for drugs. Women had had significantly more total sex partners in the 30 days preceding their interview, on average, than men (14.2 vs. 7.9, $t = -4.48$, $d = 690$, $P < .01$). Seventy-five percent of women were trading sex for money compared to 19% of males ($\chi^2 = 190.01$, $df = 1$, $P < .01$). Forty-nine percent of women were trading sex for drugs compared to 18% of males ($\chi^2 = 66.99$, $df = 1$, $P < .01$).

Relationships

The nature of the 1,384 reported relationships is shown in Table 2. As shown, partnership descriptions were not independent of gender. The majority of males described their partners as a friend, as did a plurality, though not majority, of women. Among males, the most common partner pattern consisted of two friends or a spouse and a friend. Among women, the most common patterns consisted of a spouse and a friend or two friends. Two percent of males and

13% of females reported each partner was a customer. Among men, 44% of partnership combinations involved at least one spouse, 85% involved at least one friend, and 10% involved at least one customer. Forty-six percent of the partnership combinations reported by women contained a spouse, 66% contained a friend, and 44% contained a customer. Five percent of the males and 8% of the females stated that their most frequent sex partner in the last 30 days was a third person. This difference was not significant.

Thirteen percent of men and 17% of women reported a first time sexual encounter with a partner, a non-significant difference. As noted, these cases were assigned a length of sexual relationship of 30 days (0.08 years). Overall, the average length of the partnerships described was 2.2 years ($SD = 3.7$, median = 0.5). Average length of relationship did not vary by gender. The average length of the sexual relationship for partners described as a spouse was 4.2 years ($SD = 5.0$), 1.6 ($SD = 2.8$) years for friends, and 0.7 ($SD = 1.4$) years for customers ($F = 92.20$, $df = 2$ and 1381, $P < .01$; all pairwise comparisons < 0.05 , Scheffe's post-hoc test). Similar findings were found for males and females, except that among males, the mean length of the relationship did not significantly differ between friends and customers. Overall, 33% of sexual relationships to a spouse were less than six months old. Conversely, 23% of relationships to a customer were at least 1-year-old.

Condom Use

Thirty-one percent of the sexual encounters reported by males and 29% of those reported by females involved condom use. Fifty-eight percent of males had not used a condom the last time they had sex with either of their partners, 22% had used a condom with one partner but not the other, and 20% had used a condom with each partner. Fifty-six percent of females had not used a condom with either partner, 30% had used a condom with one partner, and 13% had used with both ($\chi^2 = 7.04$, $df = 2$, $P < .05$). When describing a spouse, males used a condom the last time they had sex with 17% of their partners, 36% of the partners they described as a friend, and 33% of those they described as a customer ($\chi^2 = 33.55$, $df = 2$, $P < .01$). Females used a condom the last time they had sex with 13% of partners considered a spouse, with 35% of friends, and 32% of customers ($\chi^2 = 16.48$, $df = 2$, $P < .01$). Condom use with each partner when each partner was described similarly is shown in Table 3. In each partnership combination, the majority of males and females did not use with either partner. Use with neither partner was more common when both partners were described as a spouse, but not significantly so. Use with one partner but not the other was not uncommon (except in the male's condom use with customers).

Alcohol and Drug Use with Partners

Fifty-four percent of the encounters reported by males involved alcohol use to accompany sex, as did 40% of those reported by females ($\chi^2 = 20.62$, $df = 1$, $P < .01$). Thirty-three percent of males had not used alcohol before or during sex with either partner the last time they had sex with that partner. Twenty-six percent had used with one partner only, and 41% had used with both partners. Among women, 48% had used with neither partner, 24% had used with one partner, and 28% had used with both partners ($\chi^2 = 13.93$, $df = 2$, $P < .01$). Males reported alcohol use with 46% of their partners who they described as a spouse, 56% of partners seen as a friend, and 66% of partners described as a customer ($\chi^2 = 11.77$, $df = 2$, $P < .05$). Forty-one percent of women had used alcohol to accompany sex with a spouse, 41% with a friend, and 38% with a customer, a non-significant association. As shown in Table 3, among males there was a significant relationship between alcohol use and partnership combination when considering similarly described partners. Use with both partners was more common when each partner was a friend or customer. Use with one partner but not the other was more common with spouses and friends. Inconsistent use within partnership pairs was not uncommon among women, but was not related to the nature of the relationship.

Seventy-six percent of males' reported partnerships involved drug use to accompany sex, as did 72% of females'. Thirteen percent of men had not used drugs before or during sex with either partner the last time they had sex. Twenty-three percent had used with one partner, and 65% had used with both. Thirteen percent of women had not used drugs with either partner the last time they had sex. Thirty-one percent had used with one partner, and 56% had used with both. The association between use and gender was not significant. Males had used drugs to accompany sex with 63% of the partners they described as a spouse, 80% of the partners they considered a friend, and 92% of the partners they described as customers ($\chi^2 = 38.95$, $df = 2$, $P < .01$). Females had use drugs with 67% of partners considered a spouse, 72% of friends, and 76% of customers, a non-significant association. As shown in Table 3, drug use with both partners appeared to be more common than alcohol use. Males were more likely to use alcohol or drugs with both partners when partners were described as friends or customers. A similar, though not significant, pattern held for females. Again, use with one partner but not the other was not uncommon (except in the case of males' use with customers).

Partner Intimacy

Mean partner intimacy scores are summarized in Table 4. Participants' feelings towards each partner were associated with the nature of the relationship. Among males and females, intimacy was higher for partners described as a spouse compared to friends and customers and higher for friends than for customers. As shown in Table 4, among males, intimacy scores between partners were comparable when each partner was a spouse or a customer, but were higher for the most recent partner when each partner was a friend. When women described each partner similarly, they reported higher mean levels of intimacy for their most recent partner when both partners were a friend or both were a customer (Table 5).

Condom Use Responsibility and Self-Efficacy

Condom use responsibility and condom use self-efficacy are summarized in Tables 3 and 4. Responsibility was not independent of relationship type. Among men and women, mean scores were lower for spouses compared to friends and customers. Males who had similar partners had a higher mean score for their next to last partner than their last partner when each partner was a spouse or each partner was a friend. Scores for women with similar partners did not vary between the two partners.

Self-efficacy scores were associated with partner type. Among men and women, self-efficacy was significantly lower with spouses than with friends. There was no significant difference in scores between spouses and customers or between friends and customers. Among men and women, when partners were described similarly, mean self-efficacy scores did not significantly differ for the most recent and next most recent partner. The correlation between intimacy and self-efficacy among the 994 relationships reported by males was -0.19 ($P < .01$) and between intimacy and condom use responsibility was -0.30 ($P < .01$). For the 390 partnerships reported by females, the respective correlations were -0.16 ($P < .01$) and -0.37 ($P < .01$).

Discussion

The purpose of this study was to examine the extent of multiple recent sexual partnerships in a sample of active crack users, how participants with multiple partners described their relationships with their two most recent partners, and how the nature of the relationship was associated with STD risk behaviors and affective variables. Over 90% of those initially interviewed reported multiple sex partners in the 30 days preceding their interview. Among both males and females in the study, the most common description of a partner was as a friend. While equal percentages of men and women described their partners as a spouse, men were more likely to describe a partner as a friend and women more likely to report customers. Women

reported more sex partners, on average, than did men, and women were more likely than men to report trading sex for money or drugs. The presence of new sexual encounters was common among males and females. The joint description of participants' two most recent partners was associated with gender. Over two-fifths of the joint partnerships reported by men and women included at least one spouse. Males' partnerships were more likely to contain at least one friend while females' were more likely to include at least one customer.

Overall, when describing their most recent sexual encounter with a partner, the majority of the encounters described by male and female participants involved unprotected sex. The majority involved drug use to accompany sex. Over half of males' partnerships involved alcohol use to accompany sex, as did two-fifths of womens'. Unprotected sex was more common with partners described as a spouse. Among males, alcohol use to accompany sex was more common with friends and customers, while among females, there was no association between alcohol use and relationship type. Similarly, males were more likely to use drugs to accompany sex with friends and customers (though use with spouses was also common). Use among females was common with each type of partner. While risk behaviors were often consistent with both partners, there were cases in which a behavior took place with one partner but not the other, even in cases in which each partner was described similarly. In the case of alcohol use and drug use by males, behaviors were not independent of the joint nature of the partnerships when similar partnerships were considered.

With regard to the affective measures, intimacy was highest with spouses among both men and women. Feelings of responsibility for using condoms with partners were lowest for spouses, as were feelings of condom use self-efficacy. Mean self-efficacy scores did not differ significantly in cases where each partner was described similarly. Men and women had higher mean intimacy scores for their most recent partner than for their second most recent partner when both those partners were friends. Women had higher mean intimacy scores for their most recent partner compared to their second most recent when both were partners. Males reported greater feelings of condom use responsibility, on average, for the second most recent partner compared to the most recent when each of those partners was a spouse or each was a friend.

These results show that the formation of monogamous relationships was not the norm in this sample. However, the results also showed that, though many partnerships may have been formed due to trading sex for money or drugs, partnership patterns among crack users are more complex than simply trading associations. The majority of participants' partners were described as a friend or acquaintance and one quarter were described as a spouse or a lover. The most common partnership combination was for each partner to be described as a friend or acquaintance. As reported, most partnership combinations consisted of at least one friend, and many consisted of at least one spouse. This suggests some level of attachment in many relationships in which participants consider their partners as something more than customers. In addition, the mean length of the relationships to partners considered a spouse and the mean score on the partner intimacy scale with spouses suggest the ability of some crack users to form close long-term relationships. However, as noted above, several participants had known partners described as a spouse or lover a short period of time, and several partners described as customers had been known for at least one year. Thus, partnership classification is not a strict function of the length of the relationship. Results also indicate that some actions with, and feelings towards, an individual's partners may differ between partners even when those partners are viewed similarly by an individual.

It is also important to note the gender differences associated with several of the factors studied. As reported, women had more sex partners, on average, than did men and were more likely to be trading sex for money and sex for drugs. Although an equal percentage of male and female participants described their partners as a spouse, women were more likely to describe

themselves as married or living with a sex partner. Women were more disadvantaged in terms of education, employment, being homeless, and being HIV positive. There is a need to examine the extent to which partnership type and gender are markers for other factors not measured in this study. For example, several studies have found power and attitudinal differentials between men and women which may lead males to preclude condom use (Johnson et al. 1992; Pivnick 1993; Friedman et al. 2002).

In addition to the biases introduced by self-reported data, there were other limitations to this study. Analyses were conducted using cross-sectional data and are descriptive but do not allow an assessment of causality. As noted, the parent study is a longitudinal study. As more data are collected, it will become possible to examine changes in behaviors and partnerships over time. In addition, qualitative interviews have been conducted with some members of the study. While findings from these interviews will be reported more fully in future papers, they suggest that drug users have very fluid relationships and sexual arrangements that are easily formed and dissolved because of their tenuous socioeconomic situation. As a result, relationship categories commonly used in research (e.g., 'spouse,' 'friend') should be used with caution. Partnership categories were presented to participants "as is," and how, for example, participants distinguished between "like a spouse" and "lover" or between "close friend" and "friend" was a subjective process. The extent of multiple partnerships points to a need for more in-depth analyses of this population with regard to participant's perceived norms regarding issues such as marriage and monogamy, condom use, substance use, and "survival sex." While African Americans are a significant at-risk group, the generalizability of results will be limited to the extent that their risk behaviors differ from users in other racial or ethnic groups. The study was conducted in one city, and again, the applicability of conclusions will be limited to the extent other locations differ in relevant factors. Future research should address issues that, while of importance, were simply beyond the scope of the current paper. One such issue would be the possible confounding effects of HIV status on the outcome variables.

There were other considerations, as well. Results presented here were based on the two most recent partners. It was believed that recall accuracy was maximized by asking about the two most recent partners. As noted, some participants stated that their most frequent sex partner in the last 30 days was a third person. Same sex partnerships among the two most recent partners were excluded from these analyses, but this did not preclude same sex activity with other partners. All participants reported engaging in vaginal sex; however 11% of those who initially qualified for the study described themselves as bisexual or homosexual. Thus, while each of the partnerships analyzed in this study was heterosexual, it may not be accurate to describe all participants as "heterosexual." Finally, each of the two sexual relationships reported by participants took place within at least 30 days of each other. Many took place within a few days of each other. However, as Gorbach et al. (2002) note, the term "concurrent" refers to "... a sexual partnership in which one or more of the members has other sexual partners, with repeated sexual activity with at least the original partner." While many of the partnerships studied here likely met this definition of concurrency, this was not assessed with certainty, and so we have presented these results in terms of "recent multiple partnerships" and not "concurrent" ones.

Despite these limitations, this study provides important information regarding crack users' partnership patterns. These patterns confirm a setting in which trading and multiple partnerships are common. They also show that many users are capable of forming close relationships and in some cases can become involved with persons that come to be seen as a spouse or lover. This study adds to the literature by considering partnership pairs as the unit of analysis. It is hoped the findings presented here can aid those responsible for the design of HIV risk reduction interventions by providing insight into the association of partnership patterns with risk behaviors and affective measures.

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Table 1

Sample characteristics by gender

	Males (N = 497) (%)	Females (N = 195) (%)	χ^2	df
<i>Age</i>				
18–19	1	4		
20–29	22	24		
30–39	70	64		
40	8	9		
			9.88*	3
<i>Marital status</i>				
Single	71	64		
Married or living as married	12	21		
Separated/divorced/widowed	17	15		
			8.08*	2
<i>Years of school completed</i>				
< 12	48	64		
≥12	52	36		
			14.20***	
<i>Employment status in 30 days prior to interview</i>				
Full-time/part-time/occasional	57	27		
Unemployed	37	59		
Disabled/homemaker/student	4	10		
Other	1	4		
			56.45***	3
<i>Income in 30 days prior to interview</i>				
No income	6	3		
< \$600	65	75		
≥\$600	29	23		
			7.31*	2
<i>Considers self homeless</i>				
No	59	72		
Yes	41	28		
			11.30**	1
<i>HIV serostatus</i>				
Negative	99	95		
Positive	1	5		
			11.22**	1
<i>Ever injected drugs</i>				
No	91	88		
Yes	9	12		
			0.99	1

	Males (N = 497) (%)	Females (N = 195) (%)	χ^2	df
<i>Currently injecting drugs</i>				
No	99	98		
Yes	1	2		
			1.19	1
<i>Used crack at least 30 times in 30 days prior to interview</i>				
No	42	36		
Yes	58	64		
			1.98	1

* $P < .05$;

** $P < .01$;

*** $P < .001$

Table 2

Partnership types and partnership patterns

	Partnerships reported by males (<i>N</i> = 994) (%)	Partnerships reported by females (<i>N</i> = 390) (%)	χ^2	df
Spouse	27	27		
Friend	67	44		
Customer	6	29		
			137.95***	2
Both partners a spouse	10	8		
Both partners a friend	49	23		
Both partners a customer	2	13		
One partner a spouse—one a friend	31	25		
One partner a spouse—one a customer	3	13		
One partner a friend—one a customer	5	18		
			215.36***	5

P < .001

Table 3

Condom use, alcohol use, and drug use by partnership pattern

	Males (N = 302)			χ^2	df	Females (N = 87)			χ^2	df
	Both partners a spouse (N = 49) (%)	Both partners a friend (N = 244) (%)	Both partners a customer (N = 9) (%)			Both partners a spouse (N = 16) (%)	Both partners a friend (N = 45) (%)	Both partners a customer (N = 87) (%)		
Condom use last time had sex										
Did not use with either partner	71	55	56			69	53	58		
Used with one partner	14	21	0			19	27	23		
Used with both partners	14	25	44			13	20	19		
				8.24	4				1.19	4
Alcohol use before or during sex last time had sex										
Did not use with either partner	47	32	22			50	42	54		
Used with one partner	27	24	0			25	27	19		
Used with both partners	27	45	78			25	31	27		
				11.35*	4				1.09	4
Drug use before or during sex last time had sex										
Did not use with either partner	25	9	0			38	16	8		
Used with one partner	31	16	0			25	24	35		
Used with both partners	45	75	100			38	60	58		
				21.85**	4				7.05	4

* $P < .05$;

** $P < .01$

Table 4

Partner intimacy, condom use responsibility, and condom use self-efficacy by partner type

Males (N = 994 Partnerships)					Females (N = 390 Partnerships)				
	N	Mean (SD)	F	Df	N	Mean (SD)	F	df	
<i>Partner intimacy</i>									
Spouse	267	8.4 (1.7)			105	8.4 (1.7)			
Friend	666	5.9 (2.2)			173	5.7 (2.6)			
Customer	61	4.9 (2.4)			112	4.0 (2.6)			
			150.06**	2,991			95.71**	2,387	
<i>Condom use responsibility</i>									
Spouse	267	4.2 (3.7)			105	4.9 (4.0)			
Friend	666	6.2 (3.8)			173	6.9 (3.7)			
Customer	61	6.5 (3.8)			112	7.6 (3.4)			
			28.34**	2,991			15.08**	2,387	
<i>Condom use self-efficacy</i>									
Spouse	267	5.0 (3.4)			105	5.0 (3.4)			
Friend	666	6.1 (3.2)			173	6.1 (3.2)			
Customer	61	5.8 (3.1)			112	5.8 (3.1)			
			14.86**	2,991			4.12*	2,387	

* $P < .05$;** $P < .01$

Table 5

Partner intimacy, condom use responsibility, and condom use self-efficacy by partnership pattern

	Males			Females			<i>t</i>	df	<i>t</i>	df
	<i>N</i>	Last partner mean (<i>SD</i>)	Next to last partner mean (<i>SD</i>)	<i>N</i>	Last partner mean (<i>SD</i>)	Next to last partner mean (<i>SD</i>)				
<i>Partner intimacy</i>										
Both a spouse	49	8.3 (1.5)	7.8 (2.1)	48	16	7.9 (1.9)	8.0 (2.1)	1.71	48	15
Both a friend	244	6.3 (2.1)	5.5 (2.2)	243	45	6.7 (2.6)	5.4 (2.6)	5.58**	243	44
Both a customer	9	3.6 (1.8)	3.8 (1.7)	8	26	4.4 (2.5)	3.1 (2.7)	−0.53	8	25
<i>Condom use responsibility</i>										
Both a spouse	49	3.5 (3.7)	4.8 (4.0)	48	16	4.9 (3.8)	5.8 (3.9)	−2.54*	48	15
Both a friend	244	5.9 (3.8)	6.3 (3.8)	243	45	6.2 (3.9)	6.8 (3.7)	−2.20*	243	44
Both a customer	9	7.2 (3.6)	7.4 (3.9)	8	26	7.7 (3.6)	7.5 (3.8)	−0.35	8	25
<i>Condom use self-efficacy</i>										
Both a spouse	49	4.1 (3.1)	4.4 (3.4)	48	16	5.5 (3.6)	6.4 (3.6)	−0.93	48	15
Both a friend	244	5.5 (3.0)	5.8 (3.3)	243	45	5.8 (3.1)	6.4 (3.5)	−1.78	243	44
Both a customer	9	5.9 (4.0)	5.5 (4.3)	8	26	5.6 (2.7)	5.7 (3.0)	1.19	8	25

* $P < .05$;** $P < .01$