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## Intention to Use Condoms Among Three Low-Income, Urban African American Subgroups: Cocaine Users, Noncocaine Drug Users, and Non-Drug Users

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**ABSTRACT** Cocaine use, marijuana use, alcohol use, and polysubstance use (e.g., alcohol and cocaine, alcohol and marijuana) are associated with high-risk sexual behavior and higher rates of sexually transmitted diseases (STDs) and human immunodeficiency virus (HIV). The purpose of this study was to examine readiness for using condoms among three groups (cocaine users, noncocaine drug users, and non-drug users) of African Americans living in low-income urban settings. African Americans in this sample differed in sex risk behaviors according to their drug use status. Noncocaine drug users reported higher levels of sex risk behaviors than non-drug users, and cocaine users reported the highest levels of risk. Cocaine users also reported lower levels of condom use with their main and nonmain sexual partners than both other groups. Results of multivariate analyses indicate that, compared to the other two groups, cocaine users are at earlier stages of readiness for condom use with main partners. Cocaine users have accurate perceptions of their HIV risk, but are more likely to factor into their decisions for using condoms cost and the trouble that it takes to get condoms. Different approaches to sexually transmitted disease and human immunodeficiency virus prevention will be necessary to meet the needs of these three different subgroups.

**KEYWORDS** African Americans, Condom use, Stages of change, STD/HIV risks, Substance use.

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### INTRODUCTION

African Americans living in Alabama are a high-risk group for sexually transmitted diseases (STDs) and human immunodeficiency virus (HIV). In 1998, African Americans were a minority (26%) of Alabama's population, but represented the majority of the state's new gonorrhea (76%), syphilis (74%), and HIV (70%) cases. The 1998 HIV prevalence rates for African American men and women in Alabama were 69/100,000 and 28/100,000, respectively, compared to rates of 11/100,000 for white men and 2/100,000 for white women.<sup>1</sup>

Compelling evidence supports the claim that cocaine use,<sup>2-4</sup> marijuana use,<sup>5</sup> alcohol use,<sup>6,7</sup> and polysubstance use (e.g., alcohol and cocaine, alcohol and mari-

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juana)<sup>5,8</sup> are associated with high-risk sexual behavior and higher rates of STDs and HIV. Cocaine use appears to be associated with especially high risk of STDs and HIV,<sup>2-4</sup> primarily because of high rates of sex without condoms, multiple sex partners, and substance-impaired sex among users.<sup>9</sup> Thus, within a population that exhibits higher rates of STDs and HIV, those who engage in noninjection drug use further increase their risk.

### **Theoretical Framework**

The transtheoretical model of change (TMC)<sup>10</sup> has been utilized to examine intentions to use condoms among different groups of individuals.<sup>11-14</sup> The TMC postulates that behavior change is a process, not an event, and that individuals are at varying levels, or stages, of motivational readiness for change.<sup>15,16</sup> The stage of change construct describes the temporal dimension of change. According to the TMC, the process of achieving a successful behavior change involves movement through the five stages of change: (1) precontemplation, not thinking about change; (2) contemplation, thinking about change in the next 6 months; (3) preparation, ready to take action to change in the next 30 days; (4) action, actively engaging in change; and (5) maintenance, engaging in behavior change for 6 months or more.

The stage of change construct has been used to examine condom use intentions and behavior in a number of populations at elevated risk for STDs and HIV. For example, stage of change for condom use with main and other partners has been examined in such diverse populations as intravenous drug and crack cocaine users,<sup>17</sup> women at high risk for HIV,<sup>12,18,19</sup> and college students.<sup>15</sup> Findings from these studies illustrate the utility of the stage of change construct for examining variation in condom use behavior among populations at varying levels of risk for STDs and HIV.

### **Purpose**

This paper explores readiness for using condoms among three specific groups of drug users: cocaine users, noncocaine drug users, and non-drug users. The purpose of this study was to examine stage distributions for condom use with main and other partners among these three subgroups in a sample of inner-city African Americans residing in neighborhoods with high prevalence of drug (alcohol, marijuana, and other illegal drugs) use in Birmingham, Alabama.

We hypothesized that differences in readiness for condom use with both main and other partners would be seen among the different subgroups. We predicted that, among cocaine users, noncocaine drug users, and non-drug users, cocaine users would be more likely to be in the precontemplation stage for condom use with main and other partners. That is, compared to the other two groups, cocaine users were more likely not to consider using condoms in the near future. We also predicted that non-drug users would be more likely to be in the action and maintenance stages than either cocaine users or other (noncocaine) drug users.

## **METHODS**

### **Data Source**

The data presented were collected within the context of the Center for Substance Abuse Treatment (CSAT)-funded Street Outreach to Drug Abusers—Community AIDS Prevention (SODA-CAP) project. From June through August 1998, cross-

sectional survey data were collected from 778 respondents via street intercept interviews in communities having a high prevalence of STDs and drug-related arrests. Prevalence rates for target communities were determined at the beginning of the parent study in 1996 using state health department and local justice department data available from 1991 to 1996. Communities were within four specific ZIP codes within the city. Of the 778 people originally sampled, 7 reported being intravenous drug users, and 34 reported being races other than African American. These 41 individuals were not included in the current analysis, leaving a final sample of 737 individuals who reported use of any noninjection drug, including alcohol, or no drug or alcohol use.

### **Data Collection**

All data were collected by 10 (5 men and 5 women) indigenous outreach workers. All outreach workers were African American and recovering substance users. To ensure data quality, staff at the University of Alabama at Birmingham conducted approximately 12 hours of presurvey training. The university Institutional Review Board approved the study design and protocol.

### **Data Collection Procedures**

Within each target community, several sampling sites were identified. These sites were drug procurement areas near where open-air drug transactions transpired or where a crack house was located. The rationale for selecting drug procurement areas as sampling sites was to ensure that sufficient numbers of the target population would be obtained. Prior research has shown that drug users are a hard-to-reach population because “the behaviors that define them are not common in the general population and group members are often outside of sampling frames usually used in population-based surveys.”<sup>20(p192)</sup> Police department staff, neighborhood association officers, local government officials, and former drug users were consulted to help identify drug procurement areas within each community.

Participants were offered a fast food gift certificate worth \$5 for completing the survey. Outreach workers proactively recruited participants using time-place sampling. This sampling method, which entails systematically varying data collection times and sites within sampling regions, was selected to help ensure that a representative sample of drug users was obtained in each community. Sampling quotas were established at each sampling site as described below, and outreach workers did not return to a sampling site once the established quota for that site was obtained. The number of adults in each ZIP code was multiplied by the estimated proportions of illicit drug users according to the National Household Survey on Drug Abuse.<sup>21</sup> The minimum probability sample size for a 95% confidence interval and 5% error rate<sup>22</sup> was calculated at 401 respondents. This number was rounded to 500 and divided by the respective proportions for each ZIP code. The sample size required for each ZIP code was then divided by the number of drug procurement sites within the ZIP code to establish the sampling quota for each site.

### **Measures**

All data collected for this study were self-reported and were collected using face-to-face, interviewer-administered surveys. The survey included demographic items, history of drug and alcohol use history, risky sexual behavior, and items assessing stages of change for using condoms with main and other partners.

Two separate algorithms were used to assess stage of change by partner type. The rationale for having separate staging algorithms to assess condom use by specific partner type is based on prior research, which has shown that main and other partner relationships are qualitatively different, and that individuals are at different stages of readiness to use condoms based on the partner type.<sup>14,18</sup>

Each study participant was classified into one of the five stages based on the individual's responses to the staging items. Individuals were classified as being in (1) maintenance, if for 6 months or more they had been using condoms every time they had sex; (2) action, if they had been using condoms every time, but for less than 6 months; (3) preparation, if they planned to use condoms in the next 30 days every time and were using condoms almost every time they had sex during the past 6 months; (4) contemplation, if they planned to start using condoms every time they had sex sometime in the next 6 months; and (5) precontemplation, if they did not plan to start using condoms every time they had sex in the next 6 months.

### **Analysis**

After classifying individuals into stages of change for condom use, the original five stages were collapsed into three theoretically consistent stages due to small numbers of participants in the contemplation and action stages. Consistent with Bowen and Trotter,<sup>22</sup> who encountered similar findings, the precontemplation stage remained the same; the contemplation and preparation stages were combined because these individuals were thinking about using condoms sometime in the future; the action and maintenance stages were combined because these individuals had been using condoms consistently, but for different lengths of time. All analyses regarding stage of change were based on this collapsed staging scheme.

The sample was divided according to drug use status as follows: (1) respondents reporting no drug/alcohol use in the past 30 days were considered nonusers; (2) respondents reporting any drug/alcohol use other than cocaine in the past 30 days were considered noncocaine drug users; and (3) respondents reporting any cocaine use (either alone or with other substances) in the past 30 days were considered cocaine users. These three groups were compared on demographic variables (age, sex, education) and on HIV/STD risk factors.

To test the hypotheses, the three groups were compared on stage of readiness for condom use with main and other partners. Analysis of variance (ANOVA) was conducted to assess group differences for continuous variables. Chi-square analysis was conducted to assess group differences for categorical variables. Multinomial logistic regression analysis was conducted to investigate the effect of study variables on stage of change with main and other sex partners. This type of logistic regression allows us to test a model with a categorical dependent variable with more than two levels.

## **RESULTS**

### **Demographic Information**

The demographic and HIV risk characteristics for the sample are shown in Table 1. Of study participants, 56% were men, the mean age was 33 years, and the age range was 18–73 years.

Using the drug use classification scheme described above, 51% of study participants were nonusers, 39% were noncocaine drug users, and 10% were cocaine

**TABLE 1. Demographics by drug use categories**

|                     | Total<br>(N = 737) | Nonusers<br>(N = 376) | Noncocaine<br>substance<br>users<br>(N = 287) | Cocaine<br>users<br>(N = 74) |
|---------------------|--------------------|-----------------------|---|------------------------------|
| Age, years (mean)   | 33                 | 33                    | 33  | 32                           |
| Gender, n (%)       |                    |                       |   |                              |
| Male                | 413 (56)           | 174 (46)              | 196 (68)                                      | 43 (58)*                     |
| Female              | 324 (44)           | 202 (54)              | 91 (32)                                       | 31 (42)*                     |
| Education, n (%)    |                    |                       |   |                              |
| Less than 12 years  | 188 (26)           | 75 (20)               | 81 (28)                                       | 32 (44)*                     |
| High school diploma | 328 (45)           | 149 (40)              | 148 (52)                                      | 31 (42)                      |
| Some college/degree | 217 (29)           | 150 (40)              | 57 (20)                                       | 10 (14)*                     |
| Employed, n (%)     |                    |                       |   |                              |
| Yes                 | 697 (95)           | 284 (76)              | 210 (73)                                      | 34 (46)*                     |

\* $P < .05$  indicates differences in proportions among drug use categories.

users. Demographics by drug use categories are also presented in Table 1. Men were significantly more likely to be cocaine or other drug users than nonusers ( $P < .01$ ). Women were more likely to be nonusers ( $P < .01$ ). Cocaine users were more likely to have less than a high school diploma than other drug users and nonusers ( $P < .01$ ), and nonusers were more likely to have attended college than the other two groups.

### Risk Factor Information

STD and HIV risk factor information is presented in Table 2. Of the study participants, 12% reported that they had been homeless at some point in their adult life. Within the 30 days prior to being interviewed, 4% of study participants reported trading sex for drugs, 7% reported trading sex for money, and over one third (35%) reported having multiple sex partners. Only 5% reported that they had a sexually transmitted disease during their lifetime.

**TABLE 2. Risk behaviors by drug use categories**

|  | Total<br>(N = 737) | Nonusers<br>(N = 376) | Noncocaine<br>substance<br>users<br>(N = 287) | Cocaine<br>users<br>(N = 74) |
|--|--------------------|-----------------------|---|------------------------------|
| Mean days used alcohol, past 30 days           | 14.50              | —                     | 13.22   | 19.35*                       |
| Mean number of drinks, past 30 days            | 5.03               | —                     | 4.79  | 5.68*                        |
| Mean days used marijuana, past 30 days         | 18.24              | —                     | 18.06   | 18.64                        |
| Mean number of sex partners, past 30 days      | 1.22               | 0.97                  | 1.29  | 2.18*                        |
| Ever traded sex for money, n (%)               | 56 (8)             | 7 (2)                 | 17 (6)  | 32 (43)*                     |
| Ever traded sex for drugs, n (%)               | 27 (4)             | —                     | 5 (2)   | 22 (30)*                     |
| History of sexually transmitted disease, n (%) | 38 (5)             | 16 (4)                | 9 (3)   | 13 (18)*                     |
| Ever been homeless, n (%)                      | 85 (12)            | 45 (12)               | 22 (8)  | 18 (26)*                     |

\* $P < .05$  indicates differences in proportions among drug use categories.

STD/HIV risk factor information by drug use categories is also presented in Table 2. Cocaine users were significantly more likely than noncocaine drug users and nonusers to have ever been homeless, have a history of STDs, and traded sex for money during the 30 days prior to being interviewed ( $P < .01$ ). Although those in stable relationships were not more likely to be in any one drug user group, cocaine users had more sex partners in the past 30 days than nonusers and noncocaine drug users.

#### Frequency of Drug Use

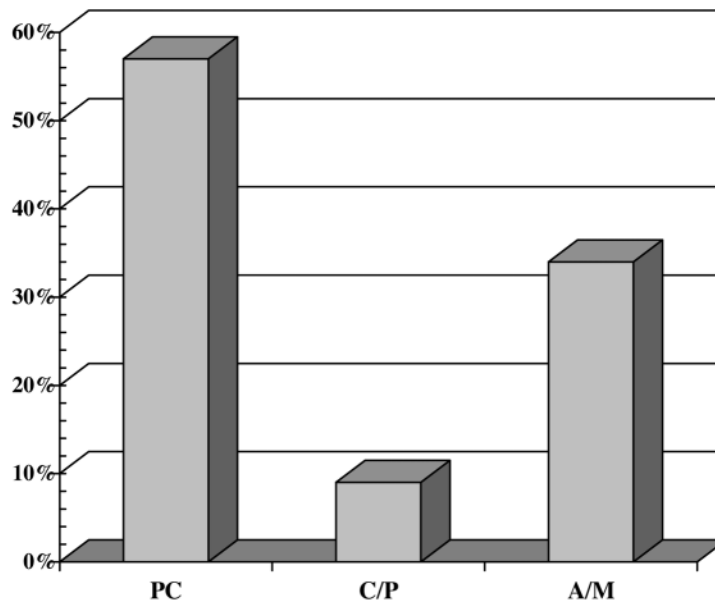
Frequency of drug use by drug use categories is also presented in Table 2. Cocaine users reported consuming more alcohol within the past 30 days than noncocaine drug users. Cocaine users also reported consuming alcohol on more days within the past 30 days than noncocaine drug users ( $P < .01$ ).

#### Stage of Change with Main Partner

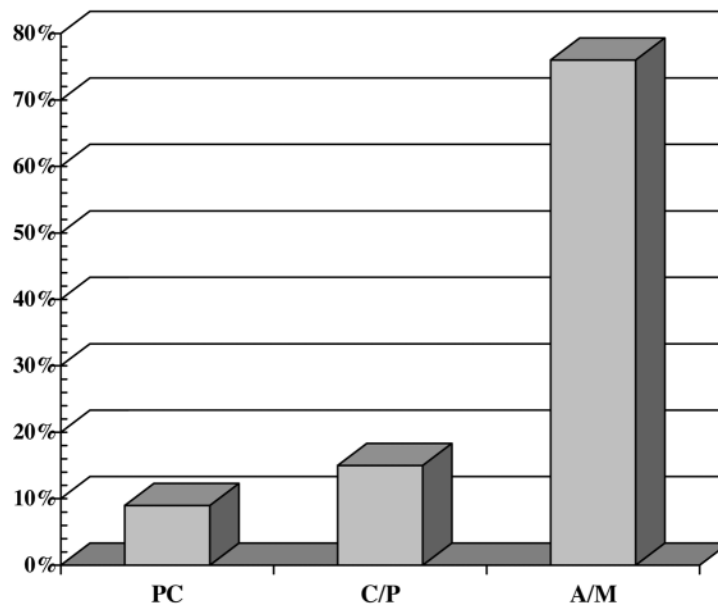
Of the study participants, 53% reported having a main sex partner at the time of interview. The distribution of participants across the stages of change for condom use with main partners is presented in Fig. 1. The majority of respondents (66%) were not using condoms every time they had sex with main partners, placing them at risk for HIV and other STDs, with more than one half (57%) reporting that they had no intentions to start using condoms consistently.

#### Stage of Change With Other Partners

There were 37% of the study participants who reported having other sex partners at the time of the interview. As illustrated in Fig. 2, nearly one quarter (24%) were not using condoms every time they had sex with their other sex partners, with 9% reporting no intention to start using condoms consistently in the foreseeable future.



**FIGURE 1.** Distribution of participants across stages of change for condom use with main sex partners. PC, precontemplation; C/P, contemplation/preparation; A/M, action/maintenance.



**FIGURE 2.** Distribution of participants across stages of change for condom use with other sex partners. PC, precontemplation; C/P, contemplation/preparation; A/M, action/maintenance.

#### **Stage of Change With Main Partners by Categories of Drug Use**

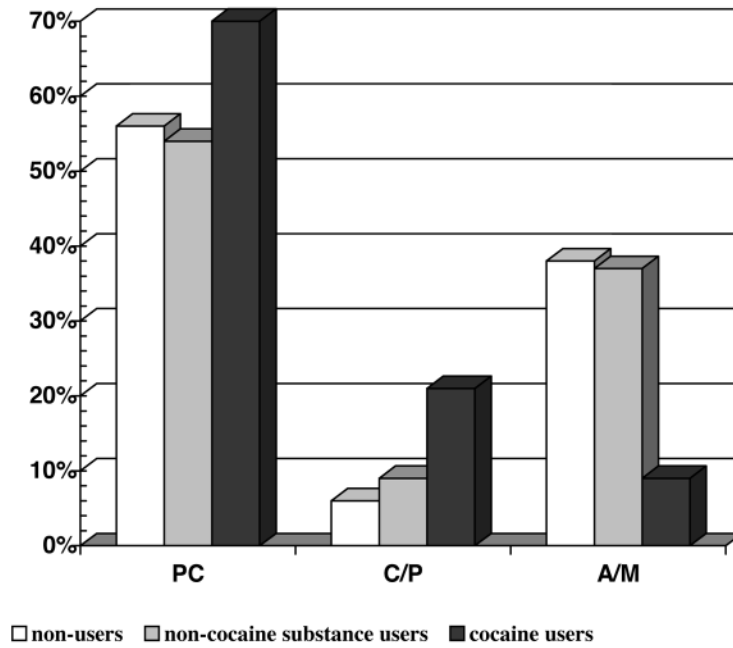
Stage distributions for condom use with main partners by categories of drug use are presented in Fig. 3. The majority of participants in each of the three categories were not using condoms every time they had sex with main partners. The proportion of cocaine users who were not consistently using condoms with their main sex partners (91%) was significantly higher than the proportions of noncocaine drug users (63%) and nonusers (62%) ( $P < .01$ ) for this same behavior. However, there were no differences between noncocaine drug users and nonusers using condoms. The proportion of cocaine users who were not thinking about using condoms with their main sex partners in the next 6 months (70%) was significantly higher than the proportions of noncocaine drug users (54%) and nonusers (56%) ( $P < .01$ ).

#### **Stage of Change With Other Partners by Drug Use Categories**

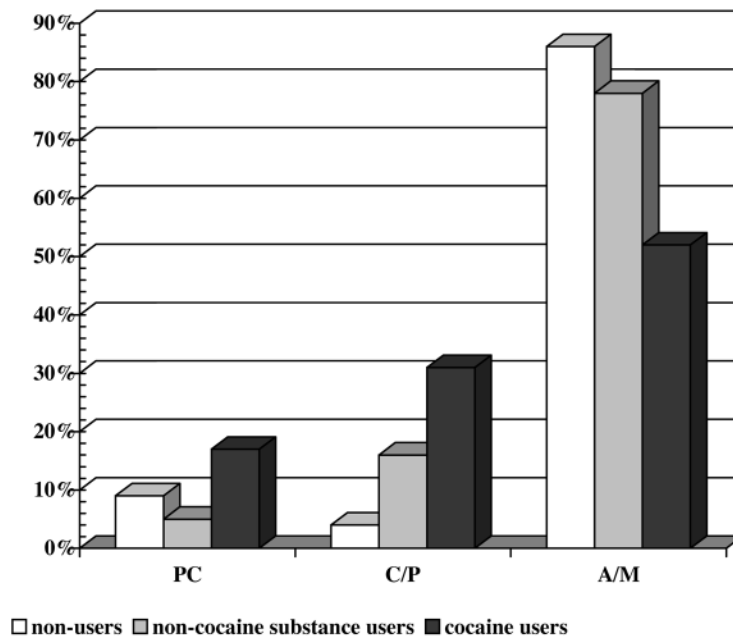
Stage distributions for condom use with other partners by categories of drug use are presented in Fig. 4. Cocaine users were less likely (51%) than noncocaine drug users (78%) and nonusers (87%) to be using condoms consistently with their other partners ( $P < .01$ ). The proportion of cocaine users who were not thinking about using condoms with their other sex partners in the next 6 months (17%) was significantly higher than the proportions of noncocaine drug users (5%) and nonusers (9%) ( $P < .01$ ).

#### **Multivariate Analysis for Stage of Change With Main Sex Partner**

The results of the multivariate analysis for stage of change for condom use with main partners are presented in Table 3. The reference category for the dependent



**FIGURE 3.** Distribution of participants across stages of change for condom use with main sex partner by categories of drug use. PC, precontemplation; C/P, contemplation/preparation; A/M, action/maintenance.



**FIGURE 4.** Distribution of participants across stages of change for condom use with other sex partners by categories of drug use. PC, precontemplation; C/P, contemplation/preparation; A/M, action/maintenance.



**TABLE 3. Multinomial logistic regression results: main partners**

| Variables   | PC versus A/M        |          | C/P versus A/M       |          |
|---|----------------------|----------|----------------------|----------|
|   | OR (CI)              | <i>P</i> | OR (CI)              | <i>P</i> |
| Education   | 0.994 (0.741– 1.334) | .970     | 0.589 (0.329– 1.052) | .074     |
| Age   | 1.054 (1.027– 1.082) | .000     | 1.019 (0.972– 1.068) | .439     |
| Number of different sex partners  | 0.987 (0.744– 1.310) | .929     | 0.799 (0.439– 1.453) | .462     |
| Nonusers versus cocaine users   | 0.514 (0.251– 1.052) | .069     | 0.192 (0.006– 0.574) | .003     |
| Noncocaine users versus cocaine users                                   | 0.408 (0.194– 0.855) | .018     | 0.227 (0.007– 0.700) | .010     |
| Male versus female  | 0.759 (0.460– 1.253) | .281     | 0.403 (0.168– 0.970) | .043     |
| Employed versus not employed  | 1.193 (0.611– 2.330) | .605     | 1.360 (0.445– 4.160) | .589     |
| Homeless versus not homeless  | 1.184 (0.504– 2.781) | .698     | 0.392 (0.007– 2.245) | .293     |
| Has traded sex for money versus has not                                 | 3.695 (0.771–17.720) | .102     | 2.526 (0.309–20.664) | .387     |
| Has been told she or he had sexually transmitted disease versus has not | 1.231 (0.229–6.617)  | .809     | 8.504 (1.322–54.704) | .024     |

A/M, action/maintenance; CI, confidence interval; C/P, contemplation/preparation; OR, odds ratio; PC, precontemplation.

variable in this model was the combined action/maintenance stage. The main independent variable of interest was drug use categories. The reference group for drug use categories was the cocaine user group. Demographic and other study variables were included in this model as covariates. The overall fit of the model was tested by a chi-square statistic, chi square ( $df = 20$ ) = 56.20 and  $P < .001$ , indicating a significant relationship between the set of study variables and condom use with main sex partners. The Nagelkerke pseudo  $R^2$  statistic for this model was 0.174, indicating the approximate proportion of variability (17%) in the dependent variable explained by the multinomial regression model.

A review of the significant B coefficients from column 1 of model 1 (Table 3), in which the action/maintenance stage was used as a reference category for the precontemplation stage, indicates that the variables that were associated with being in precontemplation versus being in action/maintenance for condom use with main partners were age and drug use. Older individuals had higher odds of being in precontemplation for condom use with their main partners than younger individuals. Individuals who were classified as noncocaine drug users had lower odds of being in precontemplation for condom use with their main partners than did cocaine users.

A review of the significant B-coefficients from column 2 of model 1, for which the action/maintenance stage was used as a reference category for the contemplation/preparation stage, indicates that the variables that were associated with being in contemplation/preparation versus being in action/maintenance for condom use with main partners were gender, STD history, and drug use status. Men had higher odds of being in contemplation/preparation than women. Individuals with a history of STDs had higher odds of being in contemplation/preparation than individuals without a history of STDs. Non-drug users and noncocaine drug users had lower odds of being in contemplation/preparation than did cocaine users.

### Multivariate Analysis for Stage of Change With Other Partner

The results of the multivariate analysis for stage of change for condom use with other partners are presented in Table 4. The reference category for the dependent variable in this model was the combined action/maintenance stage. The main independent variable of interest in this model was drug use categories. The reference group for drug use categories was the cocaine user group. Demographic and other study variables were included in this model as covariates. The overall fit of the model was tested by a chi-square statistic, chi square ( $df = 20$ ) = 55.20 with  $P < .001$ , indicating a significant relationship between the set of study variables and condom use with main sex partners. The Nagelkerke pseudo  $R^2$  statistic for this model was 0.284, indicating the approximate proportion of variability (28%) in the dependent variable explained by the multinomial regression model.

A review of the significant B coefficients from column 1 of model 2 (Table 4), for which the combined action/maintenance stage was used as a reference category for the precontemplation stage, indicates that the variable that was associated with being in precontemplation versus being in action/maintenance for condom use with other partners was age. Older individuals had higher odds of being in precontemplation for condom use with their other partners than did younger individuals.

A review of the significant B coefficients from column 2 of model 2, for which the action/maintenance stage was used as a reference category for the contemplation/preparation stage, indicates that the variables that were associated with being in contemplation/preparation versus being in action/maintenance for condom use with other partners were education and drug use status. Less-educated individuals had higher odds of being in contemplation/preparation than did more educated individuals. Nonusers had lower odds of being in contemplation/preparation than did cocaine users.

**TABLE 4. Multinomial logistic regression results: other partners**

| Variables   | PC versus A/M        |      | C/P versus A/M       |      |
|---|----------------------|------|----------------------|------|
|   | OR (CI)              | P    | OR (CI)              | P    |
| Education   | 1.235 (0.651– 2.343) | .519 | 0.470 (0.247– 0.895) | .022 |
| Age   | 1.065 (1.005– 1.128) | .032 | 1.013 (0.969– 1.060) | .559 |
| Number of different sex partners  | 1.120 (0.836– 1.501) | .447 | 1.114 (0.850– 1.460) | .433 |
| Nonusers versus cocaine users   | 1.172 (0.291– 4.719) | .823 | 0.240 (0.006– 0.989) | .048 |
| Noncocaine users versus cocaine users                                   | 1.150 (0.253– 5.221) | .857 | 1.900 (0.698– 5.171) | .209 |
| Male versus female  | 0.687 (0.230– 2.056) | .502 | 0.660 (0.275– 1.584) | .353 |
| Employed versus not employed  | 0.435 (0.139– 1.454) | .177 | 0.997 (0.410– 2.426) | .995 |
| Homeless versus not homeless  | 2.160 (0.685– 6.818) | .189 | 0.550 (0.163– 1.857) | .336 |
| Has traded sex for money versus has not                                 | 0.831 (0.163– 4.243) | .824 | 2.600 (0.820– 8.241) | .105 |
| Has been told she or he had sexually transmitted disease versus has not | 4.105 (0.985–17.105) | .052 | 3.059 (0.811–11.530) | .099 |

A/M, action/maintenance; CI, confidence interval; C/P, contemplation/preparation; OR, odds ratio; PC, precontemplation.

## DISCUSSION

The purpose of this study was to examine the relationship between drug use category and stage of change for condom use with main and other partners within a group of African Americans in an urban setting in the Deep South. The results of our analyses showed that drug use status and demographic factors account for a small amount of the variability in condom use with main and other partners for members of this group. We predicted that cocaine users would be more likely to be in the precontemplation stage for condom use with main and other partners compared to noncocaine drug users and non-drug users. We also predicted that non-drug users would be more likely to be in the action/maintenance stage for condom use with main and other partners compared to cocaine users or other (noncocaine) drug users. We found both hypotheses to be partially supported.

The first hypothesis was partially supported in that we found that the odds of being in the precontemplation stage for condom use with main partners were lowest for noncocaine drug users. Although not statistically significant ( $P = .069$ ), non-drug users also appear to be nearly half as likely to be in precontemplation as cocaine users. This did not hold true for condom use with other partners in that the odds of being in the precontemplation stage did not differ across drug use categories.

The second hypothesis was partially supported in that we found that the odds of being in the action/maintenance stage for condom use with main partners was lower for cocaine users than nonusers. However, the odds of being in action/maintenance for condom use with main partners did not differ between non-drug users and noncocaine drug users. (We had predicted that non-drug users would be more likely to be in action/maintenance than either type of drug user.) With regard to condom use with other partners, hypothesis two was supported. Nonusers had higher odds of being in action/maintenance than either noncocaine drug users or cocaine users.

Our data indicate that, for condom use with main partners, compared to cocaine users, the two other groups were half as likely to be in precontemplation and even less likely to be in contemplation/preparation. Said another way, cocaine users were more likely to be in the earlier stages of change for condom use with main partners. Given their higher HIV/STD risk level, cocaine users, ideally, should be at stages of readiness that reflect this risk (i.e., more likely to take harm-reduction steps such as using condoms). However, that was not the case with our sample. One reason for this may be that cocaine users were not motivated to use condoms because they did not perceive their risk as elevated. Bowen and Trotter<sup>17</sup> found perceived HIV risk to be generally low among cocaine users. However, it does not appear that earlier stages of readiness of cocaine users in our sample were due to inaccurate perceptions of risk level because cocaine users reported their chances of getting acquired immunodeficiency syndrome (AIDS) to be significantly higher ( $P < .05$ ) than did other substance users and non-substance users. This demonstrates an accurate perception of their increased risk.

The finding that cocaine users are generally knowledgeable about AIDS and HIV risks was also demonstrated by Word and Bowser,<sup>4</sup> who suggested that there are more factors than unwillingness to change risk behaviors at work among cocaine users. To explore further the possible reasons for cocaine users to be less likely to use condoms, we examined their endorsement of several advantages and disadvantages of condom use. We found that cocaine users were significantly more

likely than the other two groups to factor into their decisions the cost of condoms ( $P < .05$ ) and the trouble that it takes to get condoms ( $P < .05$ ). If cocaine users are characterized by an inability to delay gratification, perhaps this is also reflected in a reluctance to deal with the inconvenience of condom use, leading to lower levels of readiness. The practical implication of this finding is that efforts to increase condom use among cocaine users may need to come after or be coupled with efforts to reduce or eliminate cocaine use.

Also consistent with past research was the finding that there are differences between stage distributions for main and other partners. As with other studies,<sup>16,18,22-24</sup> participants in our study were more likely to engage in consistent condom use with their other partners and less likely to engage in consistent condom use with their main partners. Given that the resources needed to conduct interventions (e.g., money, time, personnel) are finite, knowing that differences exist between stage distributions for main and other partners could help an interventionist working with this study's population set priorities for interventions according to clients' needs and resource availability.

The relatively low rate of self-reported history of STDs in this population is noteworthy. Having experienced an STD would logically influence a person toward greater readiness subsequently to use condoms. If the rate of STD is truly as low as reported, it could account for a number of people being in earlier stages of change than action or maintenance. It should also be taken into consideration that the cocaine user group had a significantly higher rate of previous STD than did the other two groups (18% vs. 3% and 4%).

Limitations should be noted. First, the stages of change were collapsed due to small numbers of participants in some stages. Whether this occurred because this is a true reflection of the stage distributions of this population or because not enough people were sampled is unknown. Future studies should be conducted with larger sample sizes to explore this situation. Second, this study relied on self-reported data; therefore, the problems that are inherent in studies relying on self-reported data (e.g., recall bias) also apply here.

## CONCLUSION

The findings from this study provide stage distributions for an important HIV and STD preventive behavior—condom use with main and other partners—for three groups of low-income, inner-city African Americans: cocaine users, noncocaine drug users, and non-drug users. These distributions show that there are differences in readiness to change risky sex behaviors by drug use status. HIV and STD prevention program planners may want to note that these differences exist when planning interventions for members of these three high-risk subgroups. The data from this study suggest that reducing STDs and HIV through changing sex risk behaviors among African Americans that use cocaine will be a more formidable challenge for public health workers than reducing sex risk behaviors among African Americans that are noncocaine drug users and non-drug users.

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