# Comparison of Background Characteristics and Behaviors of African American, Hispanic, and White Substance Abusers Treated in Federal Prison: Results from the TRIAD Study

Jennifer L. Rounds-Bryant, PhD\* Research Analyst Federal Bureau of Prisons

Mark A. Motivans, PhD Statistician Bureau of Justice Statistics

Bernadette Pelissier, PhD Chief of Research, FCI Butner Federal Bureau of Prisons

<sup>\*</sup>Correspondence should be sent to this author at 839 Woodgrove Street, Durham, NC 27703, drjenn@ipass.net, (919) 575-4541 x3557 (w), (919) 596-8159 (h).

#### Abstract

The lack of empirical literature describing minority substance abusers who seek treatment serves as an obstacle for providing empirically-driven culturally-relevant substance abuse treatment to minorities in both prison-based and community-based programs. The purpose of this study was to address this gap in the literature by describing and comparing the background characteristics and pre-incarceration behaviors and social environments of adult African American, Hispanic, and white substance abusers who were treated in Federal Bureau of Prisons' (BOP) residential drug abuse treatment programs. The study sample included 279 African American, 72 Hispanic, and 512 white male substance abusers who were treated in 16 prisonbased residential drug treatment programs from 1991 to 1995. Consistent with the limited literature, this study tested the hypothesis that there would be significant differences among the groups on most of the variables, with the greatest differences to be noted between African American and white participants. The results indicated that there were numerous significant differences in demographic and background, family background, and criminal history characteristics, but there were only a few differences in pre-incarceration behaviors and social environment among participants. The findings suggested that addressing participants' treatment needs within the context of their cultural characteristics would enhance treatment for participants.

### Introduction

Despite the recent explication of culture-specific substance abuse treatment models for minority substance abusers (Roberts, Jackson & Carlton-Laney 2000; Perez-Arce, Carr & Sorensen 1993; Wallace 1993), there is little empirical information about minority substance abusers who seek treatment. Therefore, most researchers and treatment providers have very limited understanding of the diverse cultural characteristics and clinical profiles of minority substance abusers (both as individual groups and relative to white substance abusers) and they do not know whether substance abusers from minority groups have unique treatment needs. This lack of information serves as an obstacle for providing empirically-driven culturally-relevant substance abuse treatment to minorities in both prison-based and community-based programs.

The dearth of information available about minority substance abusers who enter treatment can be attributed both to minorities' historical relative lack of access to and participation in substance abuse treatment and their relative absence in substance abuse treatment studies (Kline 1996; Longshore et al. 1992). However, even when minorities are adequately represented in the samples of large research studies, most investigators do not report findings specifically for minority subgroups (Simpson et al. 1999; Hubbard et al. 1997). Researchers' practice of including African American race and Hispanic ethnicity in multivariate modeling of treatment outcomes does not provide adequate description of the minority subgroups in these studies (Gerstein et al. 1997). Therefore, the purpose of this study is to address this gap in the literature by describing and comparing the background characteristics and pre-incarceration behaviors and social environments of adult African American, Hispanic, and white substance abusers treated in the Federal Bureau of Prisons' (BOP) residential drug abuse treatment program.

#### **Prior Research**

Much of what has been reported about adult minority substance abusers is limited to comparing psychiatric problems and substance use patterns of those treated in community-based substance abuse treatment programs. For example, the literature indicates that minority substance abusers tend to have fewer psychiatric problems than their white peers, with white substance abusers typically identified as more likely to report current or lifetime depression and anxiety than minority substance abusers (Compton et al. 2000; Rosenheck & Seibyl 1998).

With respect to substance use and dependence patterns, Caetano and Schafer (1996) reported that African American and Mexican American clients in a community-based alcohol treatment program were more likely than white clients to use drugs in combination with alcohol and that African American clients were more likely than white and Hispanic clients to be dually dependent on drugs and alcohol. Further, Peters, Greenbaum, Edens, Carter, and Ortiz (1998) reported that, among prison inmates with a substance abuse or dependence disorder in the month prior to incarceration, white and Hispanic inmates were significantly more likely to be diagnosed with alcohol abuse or dependence than African American inmates. With respect to specific substances, the research has consistently found that African Americans and Hispanics are more likely than white substance abusers to use cocaine (Caetano & Schafer 1996; Grella, Annon & Anglin 1995), while white substance abusers are more likely than other groups to report use of alcohol and marijuana (Compton et al. 2000).

As with the paucity of information regarding minority groups in drug treatment, there is also little information available about African American or Hispanic substance abusers' family background and social environment and how these characteristics might be related to their

substance abuse. The available substance abuse literature indicates that family background (e.g., familial substance abuse) and social environment (e.g., association with deviant peers) are associated with problematic substance use among adults (Chermack et al. 2000; Dembo et al. 2000; Sheridan 1995). For example, Chermack and colleagues (2000) found that problematic substance use was associated with a family history of violence for women and a family history of alcoholism for men.

Outside of the substance abuse literature, there is an extant sociological literature which provides evidence of the association between social environment and problematic substance use, especially among African Americans (Conley 1999; Dash 1996; James & Johnson 1996). For example, James and Johnson (1996) link problematic substance use to African Americans' change in attitude about and access to alcohol and other drugs when they relocated from the rural south to urban cities (both northern and southern) and when they joined the military. These researchers hold that historically, rural southern African Americans drank alcohol primarily during celebrations such as weddings and holidays, but their substance use increased when they encountered increased access to alcohol and other drugs along with social acceptance of casual and more frequent substance use in their new living environments. Further, in the qualitative case study of one African American woman and her family, Dash's (1996) investigation of the role of the relationship between substance abuse and social environment in the lives of five generations of the family suggested that social environment provides an important context for intergenerational problematic drug use.

Studies of "at risk" and delinquent adolescents have also elucidated the relationship between problematic substance use and social environment. Results from longitudinal studies of adolescents detail the positive association among negative family environment, association with deviant peers, and the development of substance use and other problematic behaviors (Ary et al. 1999; Dobkin, Tremblay & Sacchitelle 1997).

# **Purpose of the Study**

As stated previously, the literature provides limited descriptive information about minority substance abuse treatment participants' demographic characteristics and pre-incarceration behavior, and even less information about their family background and social environment.

Moreover, to date, there have been no studies published describing and comparing such information for minority and white prison inmates who participated in prison-based treatment.

This study fills these gaps in the literature by describing and comparing demographic and background characteristics (e.g., psychiatric history, family background, criminal history, and drug use history) and pre-incarceration behaviors and social environment (e.g., drug use and peer associations) for a sample of male African American, Hispanic, and white Federal prisoners who were treated in 16 prison-based programs. Consistent with the available literature, this study tested the hypothesis that there would be significant differences in most demographic and background characteristics and pre-incarceration behaviors and social environment among the groups, with the greatest differences to be noted between African American and white participants.

### Method

A subset of data from the BOP's multi-site drug treatment evaluation project (Treating Inmates Addicted to Drugs; TRIAD) was used to describe and compare racial/ethnic distributions across a range of pre-incarceration variables. This section briefly describes the study sample, selected variables, and the analysis approach used, leaving the more detailed descriptive statistics for the results section of this paper. The research design used in the TRIAD study is described more fully in the project's final report (Pelissier 2000).

# <u>Subjects</u>

The study sample included 279 African American, 72 Hispanic, and 512 white male substance abusers who were treated in16 prison-based residential drug treatment programs from 1991 to 1995. African American subjects in the sample had completed an average of 11.9 grades of school (sd=1.9) and had a mean age at admission to the treatment program of 32.1 years (sd=8.1). Hispanic subjects had completed an average of 11.1 grades of school (sd=2.5) and had a mean age at treatment admission of 32.4 years (sd=8.9). Finally, white subjects had completed an average of 12.4 grades of school (sd=8.7) and had an average age at entry to treatment which was slightly higher than African American and Hispanics (33.9 years, sd=8.7).

### Procedure

\_\_\_\_\_The data used for the present study were obtained from self-report interviews. Inmates participating in BOP Drug Abuse Programs (DAPs) were approached by researchers within several weeks of entering the treatment program and were administered two interviews. The first interview gathered a wide range of background information while the second interview employed the National Institute of Mental Health Diagnostic Interview Schedule (NIMH DIS) (Robins et.

al 1981) to diagnose lifetime antisocial personality and/or depression. Data on treatment services received and certain background characteristics (including race, ethnicity, prior commitments, and age at admission to treatment) were obtained from the BOP's automated databases.

# Variables

Demographic and background characteristics (e.g., employment and psychiatric history), family background (parents' marital status and work history) and criminal history (age at first crime) characteristics, pre-incarceration behavior (e.g., drug use), and social environment (e.g. peer associations) are highlighted in the results section. This section provides definitions of selected variables in each category in order to promote clarity.

Demographic and Background Characteristics. Among those employed in the month before incarceration, "type of employment" was coded as (1) professional (e.g., white collar office work, including sales) or (2) nonprofessional (e.g., blue collar, laborer, farm, and military work). The variable representing "other sources of income" included the following categories: (1) illegal activities as a main source of income for at least one year and (2) welfare as source of income in the year before arrest. Information on whether participants met criteria for lifetime diagnoses of depression and antisocial personality disorder was obtained using the NIMH DIS (Robins et. al 1981) which assessed DSM-III-R criteria (American Psychiatric Association 1987) for two diagnoses. This variable was coded as (1) antisocial personality only, (2) depression only, (3) both antisocial personality and depression, or (4) neither.

**Family Background and Criminal History.** The family background characteristics included information on the background of the family with whom participants lived with for the longest before the participants reached adulthood (with some specifying before age 17 and others before

age 18). The criminal history variables cover both childhood and adulthood. The category 'none' for the variable "crime frequency before arrest" indicates that participants were arrested the first time they committed a crime (e.g., they did not go unnoticed for any crimes before their first arrest). Finally, the variable "previously incarcerated" refers to previous incarceration in a Federal prison.

Pre-incarceration Behaviors and Social Environment. The variable "significant social time spent with" provides a measure of with whom participants spent at least one hour per day on five or more days in a typical week in the year prior to incarceration. The categories were mutually exclusive and sum to 100%. The variables related to family and friends' view of participants' drug use were derived from two questions (with identical mutually exclusive response categories) asking how participants' family members and those close to participants (other than family) felt about their drug use: (1) very much opposed, (2) somewhat opposed, (3) never discussed, (4) didn't care, (5) encouraged, (6) didn't know, and (7) other. For both family and friends, the response category "opposed participants' drug use" was derived from combining the original response categories "very much" and "somewhat opposed", while the response category "encouraged participants' drug use" was derived directly from the original response category "encouraged". Therefore, these two categories alone do not sum to 100%. Finally, note also that separate drug use variables are represented under the heading "pre-incarceration daily substance use" and do not sum to 100%.

### Analysis Approach

This study included a descriptive analysis of race/ethnicity differences using bivariate statistical tests. To detect overall differences between the means for African American, Hispanic,

and white subjects, analysis of variance tests were conducted for continuous variables (e.g., age admitted to treatment) and chi-square analysis was used for categorical variables (e.g., prior employment). If overall significant differences were observed, post-hoc t-tests were conducted between each pair of racial and ethnic groups (African American-white, African American-Hispanic and white-Hispanic), applying the associated Bonferonni correction to the p-value (p<0.05/3=.017). This allowed for a test of whether significant differences existed between specific racial and ethnic groups.

#### Results

The results of the study, which are detailed in the accompanying tables, are highlighted in this section, with the goal of profiling participants within the context of group comparisons. In the interest of clarity, the results are presented in categories consistent with those of the variable definitions.

# **Demographic and Background Characteristics**

Participants differed on most demographic characteristics, with most differences occurring between African American participants and white participants. Table 1 indicates that on average, African Americans, relative to white participants, were younger (32 years vs. 34 years, respectively) and had slightly less education (11.9 years vs. 12.4 years respectively). Hispanic participants were the same age as African American participants and had the least years of education (32 years and 11 years, respectively)(see Table 1). African Americans were notable for the lowest proportion who were employed in the month prior to incarceration, compared to white and Hispanic participants (45%, 62%, and 61% respectively). Among those employed in the month prior to incarceration, there were no differences between the groups in neither the type of

employment nor the salaries earned (see Table 1). Finally, African American participants were most likely to meet criteria for a lifetime DSM III-R diagnosis of antisocial personality disorder only (31%), while white participants were most likely to meet criteria for a DSM III-R diagnosis of depression only (11%), and Hispanics were most likely to meet criteria for neither diagnosis (64%).

### Family Background and Criminal History

Table 2 highlights the numerous differences in family background among the participants. For example, compared to white participants, African American participants came from childhood backgrounds characterized by a higher likelihood of having parents who never married (23% and 4%, respectively), being on welfare (33% and 11%, respectively), a working mother (76% and 60%, respectively), and an immediate family member who spent time in jail during participants' youth (28% and 14%, respectively). Hispanic participants' childhood background was notable for the relatively lower proportion whose parents divorced (23%) and whose mothers were in the workforce (48%). Of particular clinical relevance, white participants were the most likely to report having an immediate family member with an alcohol problem (43%) and childhood physical abuse during their youth (20%) (see Table 2).

With respect to participants' criminal history, Table 2 indicates that all participants committed their first crimes as teenagers, with Hispanics being older (but not significantly) than African American and white participants. African Americans and Hispanics were most likely to report being arrested for the first crime they committed (49% and 47%, respectively) (see Table 2). These findings are in contrast to the nearly one-half of white participants who reportedly engaged in six or more crimes before they were initially arrested (see Table 2).

### **Pre-incarceration Behavior and Social Environment**

In contrast to the differences noted between the groups on demographic, family background, and criminal history characteristics, Table 3 indicates that there were few differences between the groups with respect to their pre-incarceration behavior and social environment. For example, African American and white participants were more likely than Hispanic participants to acknowledge daily substance use and a prior drug treatment experience (see Table 3). Although, all three groups were similar in their reports of daily use of alcohol, cocaine, and opiates in the year prior to the current arrest, white participants were notable for the higher proportion who reported daily marijuana use in the year prior to arrest (see Table 3).

Although Hispanic participants reported relatively low rates of involvement in substance abuse behaviors, they were notable for the proportion who were incarcerated for a drug offense compared to both African American and white participants (75%, 47%, and 54%, respectively). Although African American and white participants were most commonly incarcerated because of a drug charge, a significant proportion of each group was also serving time for robbery (23% and 19%, respectively) and weapons (14% and 10%, respectively) charges. Relatedly, more than one-third of all three groups reported that their current offense involved attempting to get money for drugs (34% - 47%) and nearly one-half of each group reported that they were under the influence of drugs during the current offense (44% - 47%) (see Table 3).

To assess participants' social affiliations in the year prior to incarceration, they were asked with whom they spent at least one hour per day on how many days in a typical week. Table 3 shows the percentage of participants who spent at least one hour on five or more days in a typical week with family members who used and did not use drugs and with peers who used and did not

use drugs. As with other behaviors in this category, there were no significant differences between the groups, and significant time spent with family and peers who used drugs (49% - 54%) was almost evenly divided with significant time spent with family and peers who did not use drugs (44% - 51%) (see Table 3).

In light of the similarities of participants' patterns of association it was notable that there were differences among the groups in the role of friends in their drug use. African American and Hispanic participants were more likely than white participants to have friends who encouraged their drug use (37%, 37%, and 24%, respectively), while white participants were more likely than African American and Hispanic participants to cite their friends as the main source of at least one of the drugs they used (20%, 13%, and 13%, respectively) (see Table 3).

### **Discussion**

In partial support of the hypothesis, the findings from this study indicated that there were numerous significant differences in demographic, family background, and criminal history characteristics among the racial/ethnic groups, but there were only a few differences in pre-incarceration behaviors and social environment among African American, Hispanic, and white inmates treated in the prison-based DAP program. As hypothesized, the most pronounced differences were between African American and white participants, with the former appearing to come from substantially more disadvantaged backgrounds than the latter. Consistent with the literature, Hispanic participants reported some experiences that were more similar to African American participants and others which were more similar to white participants.

Compared to white participants, African Americans were younger, less educated, less likely to be legally employed prior to incarceration, and more likely to meet diagnostic criteria for

antisocial personality disorder, but less likely to meet criteria for a diagnosis of depression.

Furthermore, white participants were set apart from African American participants because they were more likely to have a family background characterized by parents who first married then divorced, a father who was in the workforce, an immediate family member who had an alcohol problem, and personal experience of physical abuse before age 18. Hispanic participants were distinguished from the other groups by a higher proportion who were incarcerated for a drug offense, and by a lower proportion who reported divorced parents, working mothers, daily drug or alcohol use, and prior drug treatment.

Although this study fills important gaps in the literature, the generalizability of the results to other samples might be limited by the following methodological challenges: (1) the data were gathered via retrospective self-report from adjudicated criminals who may have been motivated to misrepresent themselves and (2) the small number of Hispanic participants. With respect to the first challenge, the literature indicates that self-report from substance abusers can be considered accurate as long as data is collected in a manner which maximizes confidentiality (Buchan et al. 2000). Methodological efforts to address this issue were consistent with the research and included trained research staff interviewing participants in private offices, emphasizing to the participants the elements of confidentiality to be observed in collecting, storing, and reporting the data, and ensuring that treatment staff had no access to the research data. However, it should be noted that there were no safeguards against unintentional inaccuracies in recall of historical information (e.g., juvenile criminal activity, childhood abuse). Regarding the second challenge, although Hispanics comprise a relatively small proportion of inmates in the Federal prison system (and thus in our sample), it was believed that the benefit derived from characterizing them far

outweighed the cost of being unable to draw overall conclusions either about participants from the variety of cultures represented (e.g., Cuban, Mexican, and Puerto Rican) in our sample or Hispanics in other samples. Even with its challenges, this study serves an important role in characterizing African American, Hispanic, and white substance abusers treated in prison-based programs.

The results of this study are comparable to the limited research available on African American and Hispanic substance abusers who participate in substance abuse treatment and extend what is known about all three groups represented in this study. For example, that African American participants came from more disadvantaged backgrounds than white (and to a lesser extent Hispanic) participants is consistent with the broader sociological research comparing these two groups (Conley 1999; Dash 1996; James & Johnson 1996). Further, the finding that white participants were more likely to be diagnosed with depression than African American participants is consistent with the substance abuse literature (Compton et al. 2000). White participants' preference for marijuana compared to other groups was also consistent with previous studies (Compton et al. 2000). Finally, results indicating that a significant proportion of all participants reported familial alcohol problems in their background (with white participants being most likely to do so) were consistent with previous research on family background that shows a relationship between substance abuse and a family history of alcoholism (Chermack et al. 2000).

Although other comparison studies have presented information on demographic characteristics of minority and white substance abusers, this study is one of the first to describe the social environment of adult substance abusers who participate in treatment and to extend to adults the findings on the role of the social environment in problematic substance use which has

been documented among adolescents (Dembo et al. 2000; Ary et al. 1999; Dobkin, Tremblay & Sacchitelle 1997). Unlike the differences noted in demographic characteristics among the three groups, there were more similarities than differences in participants' behavior and social environment in the year prior to incarceration. For example, one-half of the participants in each group spent significant time with drug using family and/or friends, which is consistent with the literature detailing the link between deviant peer association and problematic substance use among adolescents (Dembo et al. 2000; Ary et al. 1999).

The findings point to a number of important treatment implications for both prison- and community-based substance abuse treatment programs. Of particular clinical relevance is the fact that treatment participants from the three groups evaluated in this study presented with very similar pre-incarceration characteristics. So, it is likely that they would present to treatment with similar immediate issues, along with their differing demographic and background characteristics. Therefore, addressing participants' treatment needs within the context of their cultural characteristics (e.g., family background and psychiatric profile) would likely enhance treatment for participants.

Toward the end of providing culturally-relevant treatment in prisons and communities, drug treatment professionals can start by thoroughly assessing treatment participants' backgrounds and using this information to identify the unique opportunities treatment might offer treatment participants from various groups and to provide an easily recognizable context for setting and meeting their treatment goals. For example, drug treatment can represent an opportunity for African American substance abusers like those in our study, who come from backgrounds characterized by unemployment and poverty, fatherlessness, and multiple

generations of criminal involvement and problematic substance use, to access a scarcely-available health services resource. The goal of treatment might be to acquire the multifaceted skills needed to be bi-cultural: to walk the tight rope between functioning "on the block" as well as "downtown" in order to navigate the social and economic terrain of both their own social environment and that of the American mainstream (Anderson 1999). Likewise, drug treatment with white participants like those in our study might represent the uncommon opportunity to address their mental health disorders, issues associated with childhood physical abuse, and/or current and historical family problems. Even with the cultural diversity of the Hispanic participants (e.g., Americans of Puerto Rican, Mexican, and Cuban descent) in our sample and in general, it is likely that, like African Americans, they would derive enhanced benefit from treatment that offered the opportunity for them to learn the skills needed to function successfully both in the social environments of their specific cultures and in the American mainstream (Bourgois 1995).

This study provides a more panoramic view of African American and Hispanic substance abusers than was previously available, while also providing previously unavailable information about white Federal inmates who seek substance abuse treatment. Future research is needed to elucidate the role of social background and environment in the etiology, maintenance, and amelioration of substance abuse among various subgroups treated in both prison-based and community-based programs. Future research should also include a sizable number of Hispanic substance abusers so that individual cultural groups can be described. Finally, this area of study could be efficiently advanced through the utilization of empirical databases from studies (e.g., national multi-site community- and prison-based drug treatment studies) which include a sizable

proportion of minorities in their samples.

### **REFERENCES**

- American Psychiatric Association. 1987. *Diagnostic and Statistical Manual of Mental Disorders*.

  3rd ed. Washington, D.C.: American Psychiatric Association.
- Anderson, E. 1999. Code of the Street: Decencey, Violence, and the Moral Life of the Inner City. New York: W.W. Norton & Co.
- Ary, D.; Duncan, T.; Duncan, S. & Hops, H. 1999. Adolescent problem behavior: The influence of parents and peers. *Behavior Research & Therapy* 37 (3):217-230.
- Bourgois, P. 1995. *In Search of Respect: Selling Crack in El Barrio*. New York: Cambridge University Press.
- Buchan, B.J.; Tims, F.; Dennis, M.L. & Diamond, G. 2000. Consistency and validity of marijuana use measured by self-report, collateral reports, on-site testing, and laboratory testing.

  Paper read at 62nd Annual Meeting of the College of Problems on Drug Dependence, at San Juan, Puerto Rico.
- Caetano, R. & Schafer, J. 1996. DSM-IV alcohol dependence and drug abuse/dependence in a treatment sample of whites, blacks, and Mexican Americans. *Drug And Alcohol Dependence* 43 (1-2):93-101.
- Chermack, S.T.; Stoltenberg, S.F.; Fuller, B.E. & Blow, F.C. 2000. Gender differences in the development of substance-related problems: the impact of family history of alcoholism, family history of violence, and childhood conduct problems. *Journal of Studies on Alcohol* 61 (6):845-852.
- Compton, W.M. 3rd; Cottler, L.B.; Ben Abdallah, A.; Phelps, D.L.; Spitznagel, E.L. & Horton, J.C. 2000. Substance dependence and other psychiatric disorders among drug dependent

- subjects: Race and gender correlates. American Journal of the Addictions 9 (2):113-125.
- Conley, D. 1999. *Being Black, Living in the Red: Race Wealth, and Social Policy in America*.

  Los Angeles: University of California Press.
- Dash, L. 1996. Rosa Lee: A Mother and Her Family in Urban America. New York: Basic Books.
- Dembo, R.; Wothke, W.; Seeberger, W.; Shemwell, M.; Pacheco, K.; Rollie, M.; Schmeidler, J.; Klein, L.; Hartsfield, A. & Livingston, S. 2000. Testing a model of the influence of family problem factors on high-risk youths' troubled behavior: A three-way longitudinal study.

  \*\*Journal of Psychoactive Drugs 32 (1):55-65.
- Dobkin, P.; Tremblay, R. & Sacchitelle, C. 1997. Predicting boys' early-onset substance abuse from father's alcoholism, son's disruptiveness, and mother's parenting behavior. *Journal of Consulting and Clinical Psychology* 65 (1):86-92.
- Gerstein, D.R.; Datta, R.A.; Ingels, J.S.; Johnson, R.A.; Rasinski, K.A.; Schildhaus, S. & Talley, K. 1997. Final Report: National Treatment Improvement Evaluation Survey. Chicago: National Opinion Research Center.
- Grella, C.E.; Annon, J.J. & Anglin, M.D. 1995. Ethnic differences in HIV risk behaviors, self-perceptions, and treatment outcomes among women in methadone maintenance treatment. *Journal of Psychoactive Drugs* 27 (4):421-433.
- Hubbard, R.L.; Craddock, S.G.; Flynn, P.M.; Anderson, J. & Etheridge, R.M. 1997. Overview of 1-Year follow-up outcomes in the Drug Abuse Treatment Outcome Study (DATOS).

  \*Psychology of Addictive Behaviors 11 (4):261-278.
- James, W.H. & Johnson, S.L. 1996. Doin' Drugs: Patterns of African American Addiction.

- Austin, TX: University of Texas Press.
- Kline, A. 1996. Pathways into drug user treatment: The influences of gender and racial/ethnic identity. *Substance Use & Misuse* 31 (3):323-342.
- Longshore, D.; Hsieh, S.C.; Anglin, M.D. & Annon, T.A. 1992. Ethnic patterns in drug abuse treatment utilization. *Journal of Mental Health Administration* 19 (3):268-277.
- Pelissier, B. 2000. BOP TRIAD Drug Treatment Evaluation Three-Year Outcome Report. Washington, D.C.: Federal Bureau of Prisons.
- Perez-Arce, P.; Carr, K. & Sorensen, J. 1993. Cultural issues in an outpatient program for stimulant abusers. *Journal of Psychoactive Drugs* 25 (1):35-44.
- Roberts, A.; Jackson, M. & Carlton-Laney. 2000. Revisiting the need for feminism and afrocentric theory when treating African-American female substance abusers. *Journal of Drug Issues* 30 (4):901-918.
- Robins, L.N.; Helzer, J.E.; Croughan, J. & Ratcliff, K.S. 1981. National Institute of Mental Health Diagnostic Interview Schedule. *Archives of General Psychiatry* 38 (April):381-389.
- Rosenheck, R. & Seibyl, C.L. 1998. Participation and outcome in a residential treatment and work therapy program for addictive disorders: The effects of race. *American Journal of Psychiatry* 155 (8):1029-34.
- Sheridan, M.J. 1995. A proposed intergenerational model of substance abuse, family functioning, and abuse/neglect. *Child Abuse & Neglect* 19 (5):519-530.
- Simpson, D.D.; Wexler, H.K.; Inciardi, J.A. & (Eds.). 1999. Special issue: Drug treatment outcomes for correctional settings, part 1. *The Prison Journal* 79 (3):291-371.

Wallace, B. 1993. Cross-cultural counseling with the chemically-dependent: Preparing for service delivery within a culture of violence. *Journal of Psychoactive Drugs* 25 (1):9-20.

Table 1. Demographic and Background Characteristics by Ethnicity				
Characteristics (n=missing)	AFRICAN AMERICAN (N=279)	HISPANIC (N=72)	<b>WHITE</b> (N=512)	
	Mean (sd)	Mean (sd)	Mean (sd)	
Age at DAP admission <sup>c</sup> (0)	32.1 (8.1) <sup>a</sup>	32.4 (8.9)	33.9 (8.7)	
Highest grade completed (2)	11.9 (1.9) <sup>a,b</sup>	11.1 (2.5) <sup>a</sup>	12.4 (2.0)	
Yearly pay <sup>d</sup> (dollars) (29)	\$24,099 (22,011)	\$22,847 (17,349)	\$29,033 (21,100)	
	Percent	Percent	Percent	
Employment History (8)  Never employed Employed in month prior to incarceration Unemployed in month prior to incarceration Type of Employment Among the Employede (3) Non-professional Professional Other Sources of Income (8) Illegal activitiesf Welfareg	9.5° 44.9° 45.6° 75.4 24.6 49.5° 13.5°	4.2 60.6 35.2 81.4 18.6 37.5 11.1	1.7 61.6 36.7 70.6 29.4 31.4 7.1	
Living Arrangements Before Arrest <sup>g</sup> (5) Living with spouse Living with intimate partner Not living with spouse or intimate partner	41.1 <sup>b</sup> 17.8 <sup>b</sup> 41.1 <sup>b</sup>	65.3 <sup>a</sup> 2.8 <sup>a</sup> 31.9 <sup>a</sup>	42.9 15.0 42.1	
Psychiatric Diagnoses <sup>h</sup> (55) Antisocial personality Depression Both Neither	31.4 <sup>a</sup> 5.0 <sup>a</sup> 5.0 <sup>a</sup> 58.6 <sup>a</sup>	23.2 7.1 5.7 64.0	27.4 10.9 9.0 52.7	

<sup>&</sup>lt;sup>a</sup> Significantly different from white participants, p<.017.

<sup>&</sup>lt;sup>b</sup> Significantly different from Hispanic participants, p<.017.

<sup>&</sup>lt;sup>c</sup> Highly correlated with age at release from prison.

<sup>&</sup>lt;sup>d</sup> For job worked in month prior to incarceration for current offense among those who worked.

<sup>&</sup>lt;sup>e</sup> In the month prior to incarceration for current offense.

f Main source of income for at least one year.

g In the year prior to arrest for current offense.

<sup>&</sup>lt;sup>h</sup> During lifetime.

Table 2. Family Background and Criminal History Characteristics by Ethnicity				
Characteristics (n=missing)	African American (N=279)	Hispanic (N=72)	White (N= 512)	
	Percent	Percent	Percent	
Family Background				
Parents never married (8)	22.8 <sup>a,b</sup>	11.3ª	4.3	
Parents ever divorced (8)	36.6 <sup>a,b</sup>	$22.5^{a}$	40.9	
Family ever on welfare (19)	33.1ª	20.0	10.7	
Father in the workforce (41)	90.1 <sup>a,b</sup>	100.0	97.8	
Mother in the workforce (16)	$75.6^{a,b}$	47.8	59.6	
Immediate family member had alcohol problem <sup>c</sup> (13)	$34.2^{a}$	37.5	43.3	
Immediate family member had drug problem <sup>c</sup> (8)	23.4	22.2	16.7	
Immediate family member spent time in jail <sup>c</sup> (12)	$28.0^{a}$	21.1	14.2	
Experienced physical abuse <sup>d</sup> (3)	11.9ª	13.9	20.2	
Criminal History				
Age committed first crime [mean (sd)] (21)	15.9 (6.6)	17.9 (8.2)	16.6 (7.3)	
Crime frequency before first arrest (37)		,	, ,	
None	48.7ª	47.1	35.6	
1-5 Times	16.1ª	20.5	19.8	
6+ Times	35.2ª	32.4	44.6	
Previously Incarcerated (0)	72.0	71.0	65.4	

<sup>&</sup>lt;sup>a</sup> Significantly different from white participants, p<.017.
<sup>b</sup> Significantly different from Hispanic participants, p<.017.
<sup>c</sup> Prior to participants reaching age 17 years.
<sup>d</sup> Prior to participants reaching age 18 years.

Table 3. Pre-Incarceration Behaviors and Social Environment by Ethnicity					
Pre-Incarceration Behaviors (n=missing)	African American (N=279)	Hispanic (N=72)	White (N= 512)		
	Percent	Percent	Percent		
Drug and Alcohol Use Profile					
Ever daily substance use (0)	74.6 <sup>b</sup>	$56.9^{a}$	77.9		
Prior drug/alcohol treatment (0)	40.1	$27.8^{a}$	44.0		
Pre-incarceration daily substance use <sup>c</sup>					
Alcohol (45)	35.2	27.1	37.2		
Marijuana (5)	$22.7^{a}$	20.0	30.7		
Cocaine/crack (2)	24.8	20.8	20.2		
Heroin/opiates (0)	9.0	15.3	8.8		
Other (0)	$2.5^{a,b}$	9.7	14.2		
Characteristics of the Current Offense (0)					
Drug	$47.0^{b}$	$75.0^{\mathrm{a}}$	53.7		
Violent	2.8 <sup>b</sup>	1.4	1.1		
Weapons	14.0 <sup>b</sup>	8.3	10.2		
Robbery	22.6 <sup>b</sup>	8.3	18.6		
Property	6.4 <sup>b</sup>	5.6	9.4		
Other	$7.2^{\rm b}$	1.4	7.0		
Attempting to get money for drugs (42)	35.7	46.8	33.5		
Under influence of drugs (42)	44.2	45.1	46.9		
Under influence of alcohol (4)	$19.9^{a}$	18.1	27.1		
Significant Social Time Spent with <sup>d</sup> (26 ):					
Only family members who used drugs	3.0	5.6	7.1		
Both family members and peers who used drugs	9.3	5.6	11.0		
Only peers who used drugs	36.9	45.1	35.3		
Family and peers who did not use drugs	50.8	43.7	46.6		
Family Members (42):					
Opposed participants' drug use	62.1	59.7	61.6		
Encouraged participants' drug use	0.0	0.0	0.2		
Friends (42):					
Opposed participants' drug use	11.2ª	19.3	21.0		
Encouraged participants' drug use	36.8a	37.1	24.1		
Main source of drugs	12.6ª	12.9	19.8		

 <sup>&</sup>lt;sup>a</sup> Significantly different from white participants, p<.017.</li>
 <sup>b</sup> Significantly different from Hispanic participants, p<.017.</li>
 <sup>c</sup> In the year prior to arrest for current offense.

<sup>&</sup>lt;sup>d</sup> People with whom participants spent at least one hour per day on five or more days in a typical week in the year

before arrest - categories are mutually exclusive.