

BLACK AND LATINO EXPERIENCES IN DRUG COURT: DO THEY AFFECT OUTCOMES?

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DRUG COURT OVERVIEW

Drug courts are specialized courts that handle cases of substance abusing offenders. They have become increasingly popular in the United States as a means of confronting the special challenges of drug addiction as the underlying motive for criminal activity. In this analysis I investigate differences in drug court program outcomes among Black and Latino participants. If drug courts are not meeting the needs of certain groups then it points to a possible defect in an increasingly popular court practice.

Furthermore, it brings up issues of equality in the current justice system. The present analysis looked towards the experiences of drug court participants to answer this issue. Individual experiences are important when looking at issues of equality because, when aggregated, they can point out unfair treatment.

Drug courts began in Miami-Dade County, Florida in 1989 in response to the crack-cocaine epidemic plaguing the area. For the next seven years, drug courts nearly doubled in number every year and in 2000 there were 665 drug

courts. As drug court numbers grew, so did support for them from major associations. Within ten years drug courts had the backing of The National District Attorneys Association, The National Sheriffs' Association, The Conference of Chief Justices, and many others. The financial support also grew exponentially and by 2007 the total appropriated budget of drug courts was close to \$180 million. Today there are over 2,200 drug courts in the United States with at least one drug court in each of the 50 states.¹

The rise in drug court popularity is often ascribed to their unique characteristics. Drug courts can be described as a combination between substance abuse treatment and the judicial process. The offender is required to attend treatment but also meets with a judge and case manager regularly. However, it would be inappropriate to describe all drug courts with a single program model. Each drug court adopts a problem-solving model that fits the particular needs of the offenders and communities it works with. Obviously a drug court in an urban setting will have different challenges than one in

a rural or suburban area. Drug courts' flexibility is often considered a main reason for their success. Despite their fluidity, there are ten key components to drug courts.²

1. Frequent monitoring of abstinence through testing.
2. Flexible responses to deviant behavior, i.e. positive substance testing results do not necessarily mean immediate expulsion from the program.
3. The Defense Counsel and Prosecuting Attorney work together to focus on the recovery and behavior of the offender while still protecting his or her due process rights.
4. Early identification and placement into drug court program.
5. Offenders are provided a continuum of care beginning from the court room all the way to end of the program.
6. Ongoing interaction between the court and the offender
7. Integrate substance abuse treatment with the judicial system.
8. Continual evaluation of drug court program in order to gauge effectiveness.
9. Continual education and training for drug court staff.
10. Coordination among public agencies, community-based agencies and the drug court.

The ten drug court characteristics, stated above, can be found in almost every drug court and are what set them apart from traditional courts. Research has shown that drug courts are more effective at reducing recidivism than regular courts. For example; a study of four drug courts in Massachusetts found that drug court participants were 13% less likely to be re-arrested, 34% less likely to be reconvicted, and 24% less likely to be re-incarcerated when compared to matched participants on probation.³ The empirical evidence about the effectiveness

of drug courts has been aggregated several times through meta-analysis, which formally synthesizes a large number of quantitative studies to identify the strength and consistency of an aggregate effect.⁴ As of 2008 four independent meta-analyses have found that drug courts significantly reduce crime rates ranging from 7 to 14 percentage points.

Despite all the benefits provided by drug courts, studies have identified differences in outcomes by race. Specifically, that Blacks and Latinos recidivate at a higher rate than Whites, with Blacks having the highest rate of the three.^{5 6 7}

EXPLORING RACIAL AND ETHNIC DIFFERENCES

The reasons behind racial and ethnic differences in drug court outcomes remain unclear, including whether it is a function of race or other confounding factors. However, most research points to the influence of other causes that are correlated with race, such as employment status, criminal history, and/or the participant's drug of choice.⁸ For example, Finigan found that Black drug court participants were significantly more likely to be unemployed, and have higher levels of past criminal activity.⁹ The hypothesis of the current study expands upon Finigan's analysis. Only examining socio-economic characteristics will not fully capture the possible causes, and misses key aspects of drug courts: drug offender and drug court staff interaction and intensity of drug treatment, major determinants of success. Thus, the current paper is unique in that it explores the connection between the following three possible reasons for higher recidivism rates among Blacks and Latinos.

1. Particular challenges or characteristics that are more acute or prevalent in Black and Latino communities.

2. Differences in the drug court experiences of Blacks and Latinos in respect to court contact and drug monitoring.
3. Differences in the drug treatment experiences of Blacks and Latinos, specifically different levels of treatment attendance.

DATA

The data used in this analysis comes from a multi-site drug court study conducted by the Urban Institute in collaboration with the Center for Court Innovation and Research Triangle International. The study sample included 23 drug courts across seven states; these drug court programs were chosen from a pool of 380 drug courts that participated in a national survey of drug courts programs also conducted as part of

the UI study and were intentionally selected to capture some of the significant variation across courts.

In-depth interviews with participants were conducted in three waves: once at baseline (typically within one month of when the offender entered drug court); 6 months after baseline; and again 18 months after baseline. All the information used in this analysis is self-reported by the drug court participant.

Across the 23 drug courts in the study, 57% of the participants were White, 29% were Black, 7% were Latino, and 7% did not fall into any of these categories. For the purposes of this analysis White refers to non-Latino Whites and Blacks refers to non-Latino Blacks. Each category being mutually exclusive. Table 1 displays some of the variation in demographic characteristics across these racial groups.

Table 1. Participant Characteristics

	White 57%	Black 29%	Latino 7%
Gender			
Male	67%	73%	67%
Female	33%	27%	33%
Age			
Average	32	34	30
Median	31	35	28
Education			
Percent who did not complete High School	30%	46%***	43%**
Income			
Average income 6 Months Before drug court	4365	4182	4542

* As compared to Whites; $p < 0.10$

** As compared to Whites; $p < 0.05$

*** As compared to Whites; $p < 0.01$

ANALYTIC STRATEGY AND METHODS

This analysis examined two major drug court outcomes: recidivism and relapse. In this analysis recidivism is defined as the number of self-reported crimes in the 12 to 18 month time period after entering drug court. Similarly, relapse is defined as the frequency of self-reported substance use in the 15 to 18 months after entering drug court.

Recidivism was chosen because it is often argued that crime reduction is the primary goal (and most significant benefit) of drug court, which is a criminal justice program. A slightly longer time frame (12-18 months) was used to model recidivism outcomes in order to capture criminal activity, which may occur less frequently than substance use. The goal was to capture the distinction between a participant who continually engaged in criminal behavior and one who only committed a few crimes. Working with a longer window of observation is preferable because more reliable conclusions can be drawn about each individual's general pattern of behavior than if only one or two months is examined. Using a calendaring method (developed by RAND) to improve memory recall, each participant was asked about their involvement in crime during each month since their last interview. The dependent variable was the sum of self-reported criminal activity during the 12th through 18th months.

The present analysis used relapse as another dependent variable to measure how the experiences of drug court participants were related to the participant's ability to abstain from substances. Because criminal behavior and drug dependence are so closely linked, it is a goal of any criminal justice program dealing with drug-involved offenders to reduce drug use. This dependent variable is measured between 15 and 18 months in case the offender was using more

drugs at the start of the program and less towards the end (which indicates that the program was successful). For example, if a longer time frame was used, outcomes might look similar for an individual who starts out with high drug use and continually improves (reducing drug use over time) and an individual who initially stops using drugs but then continually increases drug use. The first individual would have succeeded in reducing substance dependence while the second would have failed, but a simple average over the full follow-up period would mask the difference between the two. Therefore, substance use in the final four months of the follow-up period (after most participants would have completed the drug court program or dropped out) is used to avoid such erroneous conclusions.

To examine if the relationship between race and ethnicity and outcomes can be explained by differing experiences of Blacks and Latinos in drug court or differing drug treatment, a Mediation Analysis was conducted. Essentially, a Mediation Analysis seeks to explicate the relationship between the independent variables and the dependent variable through a third set of variables, the mediator variables. Two separate mediation analyses were conducted to test whether the relationship between race and outcomes was explained by different drug court experiences or differences in treatment participation (frequency and treatment type).

The participant's experience in drug court was represented by a select number of indicators expected to influence final outcomes: the number of self-reported meetings with case managers and the self-reported number of times the offender was tested for substances. These mediating variables were chosen as the best way to operationalize the experiences of drug court participants because they convey a feature of drug courts: continual interaction with the court. Meeting with a case manager represents how

often the offender received human interaction with the court, which likely builds a stronger relationship. The number of drug tests shows the level of supervision the court had over the offender. Both variables display crucial components that have been attributed to the success of drug courts.

The second group of mediating variables was the number of days in self-help groups, residential treatment, outpatient group treatment, and outpatient individual treatment. These particular types of treatment were chosen because they were the major treatment forms reported in the sample.

The following process was used. First, a simple t-test was used to determine whether recidivism and relapse were more prevalent among Black and Latino participants by testing for differences in the mean number of criminal events and days of drug use. Next, multivariate analysis was used to determine whether the race of the participant still predicted outcomes after controlling for participant characteristics of risk and disadvantage at baseline (these characteristics are discussed below).

Next, two mediation analyses were conducted. The first aimed to determine if any relationship between race and outcomes, which existed after controlling for baseline characteristics, was explained by experiences during drug court (drug tests and meetings with case managers). The idea is as follows: if race is associated with the frequency of drug tests or meetings with case managers and these experiences have a significant effect on outcomes, then part of the relationship between race and outcomes is actually the result of differing drug court experiences, not race directly. A mediator analysis will reveal this because the link between race and outcomes estimated when controlling only for baseline characteristics will change after also accounting for elements of the

drug court experience. This would suggest that race only impacts outcomes indirectly, through its impact on drug court processes.

Finally, a second mediation analysis was used to see if racial differences in outcomes were partially explained by differences in drug treatment received. The process and rationale are the same as above. However, in addition to being tested as mediators, any moderating effects of drug treatment were also tested. Interactions between days of drug treatment of different types and race and ethnicity were used to determine if certain types of treatment are more or less effective for individuals of different races.

As stated earlier, the present paper used a multi-site survey dataset. Zero-Inflated Negative Binomial Regressions were conducted in these analyses. The current study used this model because the dependent variables are counts and cannot be negative, so assumptions of normality (required for Ordinary Least Squares, for example) would be inappropriate. Thus, the dependent variable should be modeled according to either a Poisson or Negative Binomial

Research Note:

A Negative Binomial (NB) model was used over a Poisson Model to account for heterogeneity in the sample. A Poisson model does not allow for the variance to be adjusted independently of the mean, making it difficult to incorporate this heterogeneity. NB regressions also account for some overdispersion (an excess number of zeros observed in the data) because they allow the variance to be greater than the variance of a Poisson distribution with the same mean.

Sometimes there is more overdispersion than a Negative Binomial Model can account for. This was the case, and thus a Zero-Inflated Negative Binomial was used to account for the excess number of zeros in the dependent variables. The Zero-Inflation extension of the Negative Binomial Model works as a two-step regression, where first a regression is run to test the probability that zero events will occur. The second step models all events greater than zero according to a Negative Binomial distribution.

distribution (see note below for details).

The analysis controls for many of the participant characteristics that are outside of the drug court's influence, but which are likely to sway outcomes. All control variables are measured during the interview conducted at baseline, shortly after enrollment in the program. Some control variables were basic demographics. Race and ethnicity were measured with two dummy variables for Black and Latino, both being mutually exclusive. Age was used to control for any changes in behavior that may come with getting older. The regression included both age and age squared in order to account for age being non-linear to criminal and drug activity. The behavior rises with age to a certain point, peaks, and then drops as the offender gets older. Gender was also included because other studies have found that women tend to re-offend at a lower rate than men.¹⁰

To see if the education level of the drug court participant had any impact on outcomes, education level was included and divided into three categories: did not graduate high school, only graduated high school, and attended some college or more. Three dummy variables were used instead of a single continuous variable because it seemed inappropriate to assume that the difference between no high school education and a diploma is the same as the difference between having graduated high school and having some college.

Other studies indicate that the stability of one's home life is a predictor for successful outcomes.¹¹ In order to measure the participant's home stability the analysis accounted for where he or she lived and the level of conflict with family. Two dummy variables were used to measure housing status: homeless or lives in own home. If the participant had his or her own name on the title, lease or mortgage, the participant was considered to live within

their own home. If he or she lived on the street, in a vacant lot, or in a shelter, the participant was considered homeless. The omitted category consisted of living with family or friends. The stability of the participant's family life was measured by a single variable that was a mean of multiple questions gauging the conflict level with his or her family. The questions included how often the participant fought with his or her family, feelings about whether he or she fights too much with his or her family, and whether the participant feels like a disappointment to his or her family.

Income stability was measured by total income, excluding illegal income, in the six months before entering drug court. Income from illegal activity was excluded because the purpose of this variable is to control for financial stability, and illegal income is often unstable. Also, if the offender was making illegal income it would mean he or she is committing crimes. Thus, the inclusion of illegal income would confound the expected relationship between measured income and crime because it is hypothesized that income, all else equal, makes crime less likely.

It is also important to account for the severity of the participant's drug problem and his or her motivation to change. Severity was gauged using three variables created from factors before entering drug court: the Addiction Severity Index (ASI), a count of hard-drug use, and a count of soft-drug use. Hard-drugs consisted of heroine, methadone, amphetamines, hallucinogens, and powder/crack cocaine. Soft-drugs included marijuana and alcohol. These variables were chosen because addiction likely makes it more challenging for the participant to cease drug use and even crime. In addition, research has linked drug use and different types of drug use to the ease with which one may resist drugs and crime.¹² In order to measure the participant's motivation, the TCU Treatment Motivation Scale (a scale from 1-8) was used.

Additionally, the number of previous arrests the participant had in their lifetime was included in the model. As other studies have pointed out, a possible reason for differences in outcomes based on race and ethnicity could be due to longer criminal records among Blacks and Latinos.¹³ If the criminal is a repeat offender then he or she may be more likely to continue committing crimes compared to someone who just committed his or her first.

Lastly, the type of crime the individual committed was included in the regressions. Much like an offender who has committed many crimes, an individual who commits property crimes is different than the one who commits violent crimes. Violent crimes were a relatively small number in the sample; as a result, it was excluded from the analysis. Consequently, to control for these differences the offense that lead to their involvement with drug court was included in three categories: drug crime, and property crime.

FINDINGS

The current analysis affirmed the findings of other studies that Blacks and Latinos have

higher levels of criminal activity after completing drug court.¹⁴ A t-test revealed that Blacks reported statistically significant higher criminal activity than Whites. Blacks and Latinos also reported more drug use than White participants did. Latino participants reported the highest level of drug use; however, this was not statistically significantly different than that of Whites. Despite self-reporting higher levels of drug use and criminal activity while in drug court, Blacks and Latinos were tested for substances fewer times (on average).

T-tests also indicated that there are significant differences in the type of self-reported treatment received among different racial groups. This does not necessarily imply that drug courts prescribe treatment differently depending on race, but could instead indicate that participants of different racial groups are more or less likely to attend prescribed treatment. Further, this could be because individuals of different races could be clustered in the same courts, and racial differences might actually represent cross-court variation. Table 2 shows the results of several t-tests conducted to examine racial and ethnic differences in drug court experiences and outcomes.

Table 2. T-Test Results

	White	Black	Latino
Total Criminal Activity: 12-18 months after entering drug court	15	21*	17
Average days of drug use per month:15-18 months after entering drug court)	7	10*	11
Total Number of Times Tested For Substances	48.05	34.83***	41.29
Total Number of Contacts with Case Manager	14.52	13.17	15.20
Number of Days in Residential Treatment	18.36	15.53	15.59
Number of Days in Outpatient Group Treatment	35.38	29.76***	35.41
Number of Days in Outpatient Individual Treatment	8.71	8.96	10.24
Number of Days in Self-Help Group Treatment	59.65	35.99***	42.95***

* As compared to Whites; $p < 0.10$

** As compared to Whites; $p < 0.05$

*** As compared to Whites; $p < 0.01$

While t-tests show differences between racial and ethnic groups, regressions were run to determine whether these relationships held after controlling for other pre-existing factors, which might explain differences in outcomes. Results from the analyses of recidivism can be seen in Table 3. The results were mostly consistent with the current literature. After controlling for

things such as income and education, race no longer was statistically significant in predicting recidivism. Latinos, in fact, became less likely to recidivate than Whites when other factors are controlled for. Also consistent with other studies, women were less likely to recidivate than men.

Table 3. Recidivism

Dependent Variable: Recidivism	No Mediating Variables (MV)	With Drug Court MV	With Treatment MV
Control Variables			
Black	0.364	0.251	0.337
Latino	-0.258	-0.091	-0.114
Gender	0.464*	0.482*	0.000
Did Not Complete High School	0.351	0.055	0.002
Completed High School	0.067	-0.121	0.404
Attended Some College	0.238	-0.024	0.159
Income	0.001*	0.001**	-0.022**
Willingness to Change	-0.051	0.129	0.127
Family Conflict Level	0.235*	0.269**	0.000
Homeless	-0.618	-2.242***	0.013***
Living at Own Home or Apartment	1.077***	1.182***	0.236**
Current Arrest Involved Drugs	-0.071	-0.171	-2.182
Number of Arrests	0.002	0.000	1.267
Addiction Severity	0.037	0.025	-0.082
Hard-Drugs Used	-0.001	0.001	0.005
Soft-Drugs Used	0.002**	0.004***	0.027
Age	0.102*	0.114	0.000
Age Squared	-0.001	-0.001	0.003*
Mediators			
Number of Times Tested for Substance		-0.001	
Number of Meetings with Case Manager		-0.011**	
Days in Residential Treatment			-0.001
Days in Outpatient Group Treatment			0.002
Days in Outpatient Individual Treatment			0.003
Days in Self-Help Group Treatment			-0.002

* p <.1

** p<.05

*** p <.01

Income, home ownership, family conflict, and type of drug use were found to be significant predictors of recidivism. Higher income was related to lower recidivism. However, when controlling for days in treatment, the relationship between income and recidivism switched, surprisingly. This may indicate that more treatment was available to those with higher incomes and treatment availability was correlated with income. It is possible that those with higher income were able to receive more treatment and thus had better outcomes.

Also unexpected, offenders living in his or her own apartment or house were more likely to recidivate. At first, this is counterintuitive, but upon further consideration it makes sense. All drug court participants are drug-involved offenders. For those who owned their own home, this measure of stability did not prevent them from committing the crime, which led to drug court. In other words, they already had a stable means of living when they became involved in crime. For those who did not own their own home, the unstable lifestyle may have left greater room for improvement. Meaning it is possible that the components of drug court (case management, status hearings, and treatment) have the greatest potential for impact among those whose living situation is uncertain or unstable.

Interestingly, the association between the offender's conflict level with his or her family and recidivism dissipated once treatment was introduced into the model. This could be because treatment provides a stable support system that low-conflict families normally would provide.

Including mediators in the regression analysis further clarified the relationship between race/ethnicity and recidivism outcomes. Meeting with case managers was more frequently associated with lower recidivism,

although the number of drug tests and days in treatment did not appear to be related to this outcome. However, the inclusion of these drug court variables decreased the association of race and ethnicity variables with recidivism outcomes. This indicates that these variables accounted for at least part of the racial differences.

Findings from the analyses investigating the second dependent variable, relapse, (Table 4) were similar to the previous results. After controlling for pre-existing characteristics the connection between race and relapse weakened. The link between being Black and higher rates of relapse decreased further when mediators were added. What was unexpected was that the connection between Latino participants and relapse was strengthened once controlling for mediating variables. However, this change was not statistically significant.

Among pre-existing characteristics, home ownership, education and type of drug were significantly associated to relapse. Owning a home or apartment was positively correlated with relapse, likely through the same channel discussed above. Education was not connected with recidivism; however, for relapse it was. If the participant did not finish high school then he or she was more likely to relapse, even when controlling for mediating variables. The participant's high school completion status could be an indicator for his or her willingness to adhere to structured programs. Alternatively, the participant's continual relapse may cause the offender great difficulty in adhering to structured programs. Interestingly, hard-drug use at baseline correlated with lower relapse rates by the end of the program, and soft-drug use was the reverse of this. This result confirms past research that indicates that drug courts tend to be most successful with more serious offenders.¹⁶

When including mediating variables, relapse findings were similar to recidivism. Those who self-reported meeting with their case manager more frequently had lower relapse rates. Also, the current analysis found that more days in self-help treatment were correlated with lowered relapse rates. This finding does not

necessarily reflect that self-help groups are the most effective forms of treatment, rather, participants may enter different forms of treatment based on what the case manager, judge, treatment coordinator, and offender think are most appropriate.

Table 4. Relapse

Dependent Variable: Relapse	No Mediating Variables (MV)	With Drug Court (MV)	With Treatment (MV)
Control Variables			
Black	0.235	0.049	0.049
Latino	0.018	0.182	0.146
Gender	0.135	-0.161	-0.220
Did Not Complete High School	0.576**	0.428**	0.438**
Completed High School	0.397*	0.289	0.309
Attended Some College	0.255	0.158	0.298
Income	0.001	0.001*	0.000*
Willingness to Change	-0.114	-0.135*	-0.137
Family Conflict Level	0.081	0.031	0.049
Homeless	-1.230**	-2.040***	-1.977***
Has Own Home	0.616**	0.654***	0.795***
Current Arrest Involved Drugs	0.178	0.079	0.160
Number of Arrests	0.000	0.004	0.006
Addiction Severity	0.023	0.046*	0.042
Hard-Drugs Used	-0.001**	-0.003**	-0.004***
Soft-Drugs Used	0.002***	0.004***	0.004***
Age	0.110**	0.097*	0.113*
Age Squared	-0.001	-0.001	-0.001
Mediators			
Number of Times Tested for Substance		-0.003	
Number of Meetings with Case Manager		-0.016***	
Days in Residential Treatment			0.000
Days in Outpatient Group Treatment			0.002
Days in Outpatient Individual Treatment			-0.002
Days in Self-Help Group Treatment			-0.005***

* p < .1

** p < .05

*** p < .01

The present analysis used moderating variables in order to examine whether pre-existing characteristics and drug court treatment interacted with race and ethnicity to predict outcomes. Tables 5 and 6 display income and education interactions. For viewing purposes these tables do not present the full regression results; instead only variables for Black, Latino,

income, education and their interactions are displayed. For Latinos, income and education were found to be particularly important for reducing recidivism and relapse. However, for Black participants, only income was found to have a significant association with successful outcomes.

Table 5. Income Moderator

	Dependent Variable: Recidivism		Dependent Variable: Relapse	
	Drug Court MV	Treatment MV	Drug Court MV	Treatment MV
Control				
Black	*0.686	0.655	**0.747	*0.724
Latino	0.862	0.931	0.464	0.672
Income	***0.001	**0.001	***0.001	***0.0001
Interactions				
Black Participant's Income	-0.0001	-0.0001	***-0.0002	***.0002
Latino Participant's Income	***-0.001	***-0.001	-0.0001	*-0.001

* p <.1
** p<.05
*** p <.01

Table 6. Education Moderator

	Dependent Variable: Recidivism		Dependent Variable: Relapse	
	Drug Court MV	Treatment MV	Drug Court MV	Treatment MV
Control				
Black	0.338	0.330	0.044	0.003
Latino	** -1.167	** -1.457	-0.204	-0.300
Did Not Complete High School	-0.274	-0.284	0.232	0.221
Interactions				
Black Participant's Completion of High School	-0.065	0.045	0.195	0.288
Latino Participant's Completion of High School	*1.618	**2.011	**0.934	**1.103

* p <.1
** p<.05
*** p <.01

The current study also used moderating variables to observe whether particular drug court practices were related to greater success for individuals of a certain race or ethnicity. Like the previous two tables, Table 7 excludes all the variables from the regression that are not related to the moderating variables. In the analysis it was found that Black participants meeting with their case manager was more important to reducing relapse and recidivism than it was for White and Latino participants. In

other words, every meeting with a case manager that a Black participant had was more closely associated with his or her success than any other group in this study. In addition, Latinos had better outcomes in residential treatment than Whites or Blacks. The exact reason for this difference is unknown. However, it could be due to cultural or social differences, or possibly to the particular courts they were highly concentrated in.

Table 7. Drug Court and Treatment Moderators

	Dependent Variable: Recidivism		Dependent Variable: Relapse	
	Drug Court MV	Treatment MV	Drug Court MV	Treatment MV
Black	1.016***	0.775*	0.429*	-0.177
Latino	-0.100	0.886	0.093	0.419
Mediators				
Number of Times Tested for Substance	0.001		-0.004	
Number of Meetings with Case Manager	-0.006		-0.011**	
Days in Residential Treatment		0.003		0.000
Days in Outpatient Group Treatment		0.005		0.005
Days in Outpatient Individual Treatment		0.013		-0.003
Days in Self Help Group Treatment		-0.002		-0.005**
Moderators				
Blacks Being Tested for Substance	-0.008		0.000	
Latinos Being Tested for Substance	0.004		0.003	
Blacks Meeting with Case Managers	-0.053***		-0.041***	
Latinos Meeting with Case Managers	-0.015		-0.004	
Blacks in Residential Treatment		-0.006		0.005
Latinos in Residential Treatment		-0.038***		-0.008
Blacks in Self-Help Group Treatment		-0.005		-0.002
Latinos in Self-Help Group Treatment		-0.004		0.013

* p <.1
** p<.05
*** p <.01

Overall, the present analysis findings were similar to the conclusions of other studies.¹⁷ Specifically, it found that the relation between race and ethnicity on drug court outcomes were weakened when other individual characteristics were taken into account. In other words, the real reason behind poorer outcomes is most likely due to other factors that are particularly common among Blacks and Latinos. The connection was further weakened by the mediating factors of drug courts. In essence, the drug court process and the days in treatment were strong factors in reducing recidivism and relapse. This study's findings were similar to others but unique because it looked at three potential sources of outcome differences: participant characteristics, participant experiences with the drug court, and days in different types of treatment.

The present study found that all three play a role in reducing or increasing recidivism and relapse. However, in addition to finding what generally is beneficial to drug court participants; the current study found that there are specific characteristics, drug court practices, and types of treatment that affect Whites, Blacks, and Latinos differently. These differences were found with tests of moderating variables, and consisted of income, education, number of case manager meetings, days in self-help group treatment, and lastly residential treatment.

LIMITATIONS

Before discussing the implication of these findings it is important to highlight the limitations in the present analysis. A large caution must be given to the interpretation of this data in that we are unable to determine why differences in drug court experiences exist between participants of different races and ethnicities. Although differences are evident, it is unknown whether these are due to self-imposed factors (e.g., certain groups prefer

certain types of treatment), differential treatment, or other explanatory factors.

Also, this analysis did not test for differences in outcomes within particular drug courts. As a result, it is possible that race and ethnicity may be confounded with location. Black and Latino participants may be concentrated in particular sites and thus, the differences observed may be due to the procedures of that particular site. In addition, the analysis did not control for the size of the drug court, which other studies have found to affect results.

The dependent variables are also a point of consideration. The present analysis combined all criminal activity as one variable and drug use as another. This approach does not look at severity of crime or drug use. It would be inaccurate to describe an individual who commits four non-violent crimes as similar to the person who commits four armed robberies. The same can be said about drug use with marijuana and crack cocaine. Thus, this limits what can be said about the effectiveness of drug courts in reducing specific forms of criminal behavior. For instance, if there is a change in criminal behavior from severe crimes to smaller offenses that would mean there is a change in behavior due to drug court intervention. However, the present paper is unable to detect such differences since all crimes are combined together.

Also, this analysis did not examine the offender's interaction with the judge. A key component for drug courts is that relationship. It was excluded from this analysis because data showed offender/judge interactions were heterogeneous across all groups. This means that participants in the sample met with their judge at similar frequencies and had similar satisfaction levels from those meetings. This study was investigating what differences there might have been in the experiences between

White, Black, and Latino participants. If they all met their judge with the same frequency then this limits what can be analyzed. Lastly, the number of Latinos within the sample used by the current analysis was limited and relatively small. This makes it difficult to say much with statistical significance.

CONCLUSION AND DISCUSSIONS

The current analysis found that Black and Latino drug court participants did relapse and recidivate at a higher rate than Whites. Yet, these findings indicate that other factors correlated with race and ethnicity may help explain why this occurs. For example, education was positively correlated with reducing both recidivism and relapse. The high school graduation status of Latinos in particular was associated with better outcomes. In addition to education, income positively influenced outcomes, but had a greater impact for Blacks and Latinos. If income and education are both impacting Blacks and Latinos disproportionately to Whites then perhaps it is an indication that race and ethnic factors dissipate, or are lessened, with rising class.

The present paper found that more frequent contact with case managers was connected to better outcomes for all groups. Also, Blacks reported the least amount of contact with their case manager. However, the number of case manager meetings was more closely related to better outcomes for Blacks than Whites or Latinos. Thus this paper would recommend that drug courts should ensure that all participants meet with their case manager regularly.

As other research has shown, treatment had a significant impact on relapse and recidivism. Yet, this was dependent on the type of treatment. Self-help group treatment was most associated with improved outcomes. In addition, Blacks

and Latinos reported attending self-help groups at a statistically significant lower rate. From this, however, no specific policy implications arise because this may be due to several issues with self-selection and location. First, participants in general, who are more likely to be successful, might be self-selecting to attend self-help groups. Second, Blacks and Latinos, specifically, may be less willing to go to self-help groups, or may be choosing not to go at all, or as often. Lastly, it could be possible that the locations where these groups were in higher concentration had fewer self-help groups to offer. It is possible that it could be all three of these issues, or any combination in between. However, regardless of these different reasons, there is still something to be said about the differences. If Blacks and Latinos are going to self-help groups less often and self-help groups are connected to positive results, then a point for future studies could be to investigate this separation.

Also this paper found that particular types of treatment had different results for Blacks, Whites, and Latinos. Residential treatment was related to more positive outcomes for Latinos than other groups. Such differences may indicate that treatment effectiveness varies by individual characteristics (e.g., culture, background). Additional research into client-based treatment matching could be helpful for guiding practitioner treatment decisions. (However, it is important to note that it could be controversial to recommend residential treatment for certain groups since it is often used as a “last resort” treatment in drug courts and is more restrictive than other types of treatment.)

It would be interesting to see studies that take an approach that avoids some of the weaknesses of this analysis. It would also be beneficial to the field of drug court research to see what could be the cause behind these differences in treatment outcomes for different races and ethnicities.

More specifically, is it due to differences in the way programs are conducted based on the staff, or is it because of cultural and background differences? Answering these questions could guide how drug court treatment programs are assigned and/or run. If it were due to the staff then it would indicate that they are not trained in the best practices. However, if it were cultural differences that are the cause then it would mean that drug courts ought to take those into account when working with the offender.

This analysis also leaves the question as to why Black participants are self-reporting that they meet with their case managers at a lower frequency than Whites and Latinos. The current analysis is based on survey data. Thus, it may be possible that these individuals had the

perception that they were meeting at a lower rate than they actually were. Another reason could be due to the weakness brought up earlier about how racial and ethnic groups were clustered in specific drug courts. This being the case, these differences could be due to the procedures of those particular drug courts.

Lastly, this paper recommends that in order to address study limitations regarding regional differences confounded with race and ethnicity, future research must be done comparing these groups within specific courts. Essentially, studies need to compare across courts and within courts. This would answer whether the issue is within the structure of drug courts themselves or just the particular courts that Blacks and Latinos tend to be grouped in.

APPENDIX

Table 1. Participant Characteristics

	White (57%)	Black (29%)	Latino (7%)
Male	67%	73%	67%
Female	33%	27%	33%
Average Age	32	34	30
Median Age	31	35	28
Percent who did not complete High School	30%	46%***	43%**
Average income 6 Months Before drug court	\$4,365	\$4,182	\$4,542

* As compared to Whites; $p < 0.10$

** As compared to Whites; $p < 0.05$

*** As compared to Whites; $p < 0.01$

Table 2. T-Test Results

	White	Black	Latino
Total Criminal Activity (12-18 months after entering drug court)	15	21*	17
Average days of drug use per month (15-18 months after entering drug court)	7	10*	11
Total Number of Times Tested For Substances	48.05	34.83***	41.29
Total Number of Contacts with Case Manager	14.52	13.17	15.20
Number of Days in Residential Treatment	18.36	15.53	15.59
Number of Days in Outpatient Group Treatment	35.38	29.76***	35.41
Number of Days in Outpatient Individual Treatment	8.71	8.96	10.24
Number of Days in Self-Help Group Treatment	59.65	35.99***	42.95***

* As compared to Whites; $p < 0.10$

** As compared to Whites; $p < 0.05$

*** As compared to Whites; $p < 0.01$

Table 3. Recidivism

Dependent Variable: Recidivism	No Mediating Variables (MV)	With Drug Court MV	With Treatment MV
Control Variables			
Black	0.364	0.251	0.337
Latino	-0.258	-0.091	-0.114
Gender	0.464*	0.482*	0.000
Did Not Complete High School	0.351	0.055	0.002
Completed High School	0.067	-0.121	0.404
Attended Some College	0.238	-0.024	0.159
Income	0.001*	0.001**	-0.022**
Willingness to Change	-0.051	0.129	0.127
Family Conflict Level	0.235*	0.269**	0.000
Homeless	-0.618	-2.242***	0.013***
Living at Own Home or Apartment	1.077***	1.182***	0.236**
Current Arrest Involved Drugs	-0.071	-0.171	-2.182
Number of Arrests	0.002	0.000	1.267
Addiction Severity	0.037	0.025	-0.082
Hard-Drugs Used	-0.001	0.001	0.005
Soft-Drugs Used	0.002**	0.004***	0.027
Age	0.102*	0.114	0.000
Age Squared	-0.001	-0.001	0.003*
Mediators			
Number of Times Tested for Substance		-0.001	
Number of Meetings with Case Manager		-0.011**	
Days in Residential Treatment			-0.001
Days in Outpatient Group Treatment			0.002
Days in Outpatient Individual Treatment			0.003
Days in Self-Help Group Treatment			-0.002

* $p < .1$

** $p < .05$

*** $p < .01$

Table 4. Relapse

Dependent Variable: Relapse	No Mediating Variables (MV)	With Drug Court (MV)	With Treatment (MV)
Control Variables			
Black	0.235	0.049	0.049
Latino	0.018	0.182	0.146
Gender	0.135	-0.161	-0.220
Did Not Complete High School	0.576**	0.428**	0.438**
Completed High School	0.397*	0.289	0.309
Attended Some College	0.255	0.158	0.298
Income	0.001	0.001*	0.000*
Willingness to Change	-0.114	-0.135*	-0.137
Family Conflict Level	0.081	0.031	0.049
Homeless	-1.230**	-2.040***	-1.977***
Has Own Home	0.616**	0.654***	0.795***
Current Arrest Involved Drugs	0.178	0.079	0.160
Number of Arrests	0.000	0.004	0.006
Addiction Severity	0.023	0.046*	0.042
Hard-Drugs Used	-0.001**	-0.003**	-0.004***
Soft-Drugs Used	0.002***	0.004***	0.004***
Age	0.110**	0.097*	0.113*
Age Squared	-0.001	-0.001	-0.001
Mediators			
Number of Times Tested for Substance		-0.003	
Number of Meetings with Case Manager		-0.016***	
Days in Residential Treatment			0.000
Days in Outpatient Group Treatment			0.002
Days in Outpatient Individual Treatment			-0.002
Days in Self-Help Group Treatment			-0.005***

* p < .1

** p < .05

*** p < .01

Table 5. Income Moderator

	Dependent Variable: Recidivism		Dependent Variable: Relapse	
	Drug Court MV	Treatment MV	Drug Court MV	Treatment MV
Control				
Black	*0.686	0.655	**0.747	*0.724
Latino	0.862	0.931	0.464	0.672
Income	***0.001	**0.001	***0.001	***0.0001
Interactions				
Black Participant's Income	-0.0001	-0.0001	***-0.0002	***.0002
Latino Participant's Income	***-0.001	***-0.001	-0.0001	*-0.001

* p <.1

** p <.05

*** p <.01

Table 6. Education Moderator

	Dependent Variable: Recidivism		Dependent Variable: Relapse	
	Drug Court MV	Treatment MV	Drug Court MV	Treatment MV
Control				
Black	0.338	0.330	0.044	0.003
Latino	** -1.167	** -1.457	-0.204	-0.300
Did Not Complete High School	-0.274	-0.284	0.232	0.221
Interactions				
Black Participant's Completion of High School	-0.065	0.045	0.195	0.288
Latino Participant's Completion of High School	*1.618	**2.011	**0.934	**1.103

* p <.1

** p <.05

*** p <.01

Table 7. Drug Court and Treatment Moderators

	Dependent Variable: Recidivism		Dependent Variable: Relapse	
	Drug Court MV	Treatment MV	Drug Court MV	Treatment MV
Black	1.016***	0.775*	0.429*	-0.177
Latino	-0.100	0.886	0.093	0.419
Mediators				
Number of Times Tested for Substance	0.001		-0.004	
Number of Meetings with Case Manager	-0.006		-0.011**	
Days in Residential Treatment		0.003		0.000
Days in Outpatient Group Treatment		0.005		0.005
Days in Outpatient Individual Treatment		0.013		-0.003
Days in Self Help Group Treatment		-0.002		-0.005**
Moderators				
Blacks Being Tested for Substance	-0.008		0.000	
Latinos Being Tested for Substance	0.004		0.003	
Blacks Meeting with Case Managers	-0.053***		-0.041***	
Latinos Meeting with Case Managers	-0.015		-0.004	
Blacks in Residential Treatment		-0.006		0.005
Latinos in Residential Treatment		-0.038***		-0.008
Blacks in Self-Help Group Treatment		-0.005		-0.002
Latinos in Self-Help Group Treatment		-0.004		0.013

* p <.1

** p<.05

*** p <.01

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