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**16<sup>TH</sup> Judicial District**

**of Tennessee**

**Drug Court Program**

**Outcome Evaluation**

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## *EXECUTIVE SUMMARY*

The purpose of the outcome evaluation was to determine whether the Sixteenth Judicial District of Tennessee Drug Court program was effective. The focus of the outcome evaluation was on participants who had left the program either through graduation or by being terminated from the program. Active participants of the drug court were not included in the study. The outcome evaluation sought to answer six questions.

### **1. What information obtained at intake can be used to predict who will graduate from the program?**

- Higher numbers for lifetime arrests and arrests during the past 5 years were associated with being terminated from the drug court program.
- Higher scores on the SOCRATES willingness to change Contemplation scale at intake were associated with being terminated.
- Greater severity on the Family/Social scale of the ASI at intake was associated with graduating from the program.
- Greater severity on the Employment scale of the ASI at intake was associated with being terminated from drug court.
- Higher attendance percentages at required self-help (e.g., AA/NA) meetings, court appearances, and MRT classes were associated with graduating from the program.
- Higher percentages of positive drug screens were associated with being terminated from the drug court.

### **2. Does being in the drug court program increase participants' willingness to change their alcohol and drug use behavior (measured using SOCRATES)?**

- The contemplation and preparation scores decreased from pretest (drug court entry) to posttest (date left the drug court).
- The action and maintenance scores increased from pretest to posttest.
- Precontemplation.** Participants who preferred alcohol increased their scores more than participants who preferred marijuana. Older participants increased their contemplation scores more than younger participants did.
- Contemplation.** The scores decreased more for participants residing in Murfreesboro than for those residing outside of Murfreesboro.
- Action.** The scores increased more for Caucasians than for African Americans. The scores increased more for participants who had a violation of probation charge than it did for participants with an 'other charge'. The scores increased more for participants who preferred alcohol than for participants who preferred coke/crack as their primary drug of choice. The scores increased more for those who have never been hospitalized for mental health reasons than for those who have been hospitalized. In contrast, higher attendance percentages for self-help meetings and probation officer meetings were associated with lower change scores.
- Maintenance.** The scores increased more for participants who had a drug-related charge than for participants with an 'other charge'.

**3. Does the drug court program help participants to reduce the severity of their addiction (measured using the Addiction Severity Index)?**

- The medical severity scores increased for participants.
- The participants' severity decreased for the drug, legal, family/social, and psychiatric scales.
- Medical Severity.** The scores decreased more for African Americans than for Caucasians.
- Employment Severity.** The severity decreased more for those without health insurance than for those with insurance. The severity decreased more for those unemployed at intake than for those who were employed at intake. People with higher attendance in court experienced a greater decrease in severity.
- Alcohol Severity.** Severity was reduced for younger participants more than it was for older participants. The severity level decreased more for those who began using drugs before age 17 than it did for those who began using drugs at age 17 or later. The severity was reduced more for those hospitalized for mental health reasons than for those never hospitalized. People with higher attendance in court experienced less of a decrease in severity.
- Drug Severity.** The severity decreased more for females than for males. The severity was reduced more for those hospitalized for mental health reasons than for those never hospitalized. The reduction in severity was larger for drug court graduates than for those terminated.
- Legal Severity.** There was a larger reduction in severity for those who began using at age 17 or later compared to those who began using before age 17. The severity was reduced more for those hospitalized for mental health reasons than for those never hospitalized. The reduction in severity was larger for drug court graduates than for those terminated.
- Family/Social Severity.** The severity was reduced more for those hospitalized for mental health reasons than for those never hospitalized. The reduction in severity was larger for drug court graduates than for those terminated.
- Psychiatric Severity.** The severity decreased more for females than for males. The severity was reduced more for those hospitalized for mental health reasons than for those never hospitalized.

**4. Can information obtained at intake be used to predict who will have difficulty remaining drug free (during the first 180 days)?**

- Caucasians had more positive drug screens than African Americans.
- People who used drugs before age 17 had more positive drug screens than those who began using at age 17 or later.
- Higher psychiatric severity scores at intake were associated with more positive drug screens.
- Individuals with a primary diagnosis of anxiety had more positive drug screens than those with a primary diagnosis of substance abuse.
- The attendance percentage at required self-help meetings, MRT meetings, and meetings with the probation officer were negatively related to the percentage of positive drug screens.
- Participants who were terminated had more positive drug screens than did the participants who graduated.

**5. What is the re-arrest rate for those who leave the program?** The re-arrest rates exclude those who left the program less than 12 months ago.

- The *one year re-arrest estimates* for persons who left the program at least 12 months ago are:
  - 25.8% (8 of 31) for persons admitted to drug court (graduates & terminated);
  - 14.3% (1 of 7) for graduates;
  - 29.2% (7 of 24) for persons terminated from drug court.
- The *two year re-arrest estimates* for persons who left the program at least 24 months ago are:
  - 20% (1 of 5) for all persons admitted to drug court (graduated & terminated);
  - 0% for graduates;
  - 20% (1 of 5) for persons terminated from drug court.
- No one has been out of the program for three years or more.

**6. What information obtained at intake could be used to predict who would be arrested?**

***At Least One Arrest While in the Drug Court Program***

- Fifteen of the 72 individuals who left the drug court (20.8%) were arrested at least once while in the program.
- Fewer females (10.5%) than males (32.4%) were arrested in the program.
- A larger number of lifetime arrests was associated with having an in-program arrest.
- More people who began using drugs before the age of 17 (28%) had an in-program arrest than did those who began using drugs at age 17 or later (4.6%).
- Higher attendance percentages at self-help meetings were associated with a decreased likelihood of having an in-program arrest.
- Fewer participants who graduated (5.6%) had an in-program arrest than did participants who were terminated (36.1%).

***At Least One Arrest After Leaving the Drug Court Program***

- Fifteen of the 72 individuals, 20.8%, have been arrested since leaving the drug court.
- More participants who had a GED (50.0%) were arrested out-of-program than were participants who had less than a high school degree (9.7%).
- Larger numbers of lifetime arrests and arrests during the past 5 years were associated with having an out-of-program arrest.

In conclusion, individuals admitted to the drug court have shown an improved quality of life, i.e., reduced addiction severity and improved willingness to change their drug and alcohol behavior. Participants who graduated from the drug court have demonstrated reduced substance use and reduced arrest rates compared to those who were terminated. The one year re-arrest rates looked favorable for the drug court as well. That said, a longer time period is needed to obtain a more reliable recidivism estimate for the drug court.

## *INTRODUCTION*

### *Purpose*

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The purpose of the outcome evaluation was to determine whether the Sixteenth Judicial District of Tennessee Drug Court program was effective. Specifically, the outcome evaluation sought to answer six questions: (1) Can information obtained at intake be used to predict who will graduate from the program? (2) Does being in the drug court program increase participants' willingness to change their alcohol and drug use behavior? (3) Does the drug court program help participants to reduce the severity of their addiction? (4) What information obtained at intake can be used to predict who will have difficulty remaining drug free? (5) What is the re-arrest rate for those who leave the program? (6) What information obtained at intake can be used to predict who will be re-arrested? The focus of the outcome evaluation was on participants who had left the program either through graduation or by being terminated from the program. Active participants of the drug court were not included in the study.

### *Drug Court Description*

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A brief description of the drug court program is provided to facilitate understanding of the outcome evaluation. Readers interested in a detailed description of the counties, drug court program, and the program participants are referred to the process evaluation—which is available at [www.rutherfordcounty.org/drugcourt](http://www.rutherfordcounty.org/drugcourt).

The Sixteenth Judicial District of Tennessee Drug Court includes Rutherford and Cannon counties. The drug court received a federal grant from the Office of Justice Programs on August 31, 2000, and the drug court began admitting participants in December, 2000. Individuals referred to the drug court were evaluated by the drug court team to ensure the eligibility criteria for admission were met and that the drug court had the necessary resources to help the individuals. Persons admitted to the drug court were required to meet regularly with the judge, the case manager, and a mental health counselor. The participants admitted between December, 2000 and December, 2002 were also required to meet with a probation officer. In January, 2003 the probation supervision was brought in-house to the drug court, and the case managers began administering urine screens. Self-help meetings (e.g., AA/NA) and group therapy sessions were required for participants; residential treatment and individual counseling were available on a case-by-case basis. Participants who had clean urine screens and complied with the program rules were promoted to higher phases and then graduated. Participants who frequently had positive drug screens or refused to comply with the program rules were terminated from the program. Individuals terminated from the program had their cases sent back to the referring court judge.

## **METHODS**

### ***Design***

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A pretest/posttest design was used to determine the effectiveness of the drug court program. The advantage of this design is that participants can serve as their own control. Thus, it is straightforward to determine whether the participants changed during their time in the program. One limitation of the pretest/posttest design is that it is possible the individuals may have changed during that time—even if they had not participated in the drug court program.

### ***Sample***

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All participants included in the sample had either graduated from the drug court program or were terminated (i.e., their cases were transferred back to the originating court). Active participants were not included. The data analyzed were based on people who entered the drug court between December, 2000 and January, 2003. These same individuals graduated or were terminated between March, 2001 and July, 2003. The drug court database provided the information used for the evaluation. The arrest records for the participants (graduates and those terminated) were obtained from the public access database located in the court clerk's office and then entered into the drug court database. There were 36 graduates and 36 individuals terminated from the program.

### ***Outcome Measures***

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***Program Status***, whether a participant graduated or was terminated from the drug court program, was included as an outcome measure. Program status was included to determine which variables (e.g., gender, criminal justice history, compliance with the program), if any, could be used to predict who would succeed in the drug court program.

***SOCRATES Scores*** were used to assess participants' willingness to change their behavior related to drug and alcohol usage. The SOCRATES has five scales: Precontemplation, Contemplation, Preparation, Action, and Maintenance. The SOCRATES scores may be used to classify participants into a dominant category (i.e., only one) or can be used to create a readiness to change profile. Higher scores for each scale reflect a greater willingness to change. The dependent variable used was change in SOCRATES scores; change was defined as the last SOCRATES scores minus the SOCRATES scores at intake. The scale scores were used for evaluation purposes, rather than a single 'dominant' category score. Although there were 36 graduates and 36 terminated from the program, change scores were only available for 11 of those terminated; the other 25 people were terminated before the SOCRATES was due to be re-administered.

***Addiction Severity Index (ASI) scores*** were used to measure the extent that participants had drug and alcohol related problems. The ASI has seven scales: medical status, employment status, drug use, alcohol use, legal status, family/social relationships, and psychiatric status. Higher ASI scale scores reflect greater severity. Change scores were calculated for each of the ASI scales as the

last ASI score minus the ASI scale score at intake. Therefore, a negative difference score would indicate the drug court was effective. Change scores were calculated for the 36 graduates and the 11 terminated individuals who were in the program long enough to have the ASI re-administered.

The *percentage of positive drug screens* was used as a dependent variable. Two versions of the percentage of positive drug screens were used. One version was based on drug screens administered during the first 180 days the participants were in the drug court program. Another version was based on all drug screens administered. Using all drug screens would likely benefit the participants who had graduated because one criterion for graduation is a long time period with only negative drug screens. Thus, the percentage using all drug screens should be highly correlated with program status. The percentage based on the first 180 days was designed to evaluate whether it would be possible to predict success in the drug court program before the participants self-selected themselves out of the program. The 180 day version might not be as correlated with program status.

Three measures of recidivism were included. One measure of recidivism was whether participants who had been out of the program for at least 12 months had been arrested. A second measure of recidivism was whether each participant had been arrested at least once while in the program (**in-program arrest**). Another measure of recidivism was whether each participant had been arrested at least once since leaving the drug court program, either because of graduation or termination (**out-of-program arrest**)—regardless of the time they had been out of the program. Ideally, it would have been better to predict number of the number of in-program arrests and the number of out-of-program arrests, however, most of the participants who had been arrested, had been arrested only once. Using the number of arrests per person might be possible in future outcome evaluations once more participants leave the drug court program (i.e., graduate or become terminated). It also would have been useful to predict the number of days spent in jail for those arrested after leaving the drug court, but very few cases had reached the sentencing stage at the time the database was given to the evaluator to analyze the data. Thus, information regarding the number of days incarcerated was seldom available.

### ***Variables Used to Predict Outcome Measures***

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**Demographic information** included in the analyses was obtained during intake. The participants' age, gender, ethnic/racial affiliation, marital status, employment status, and educational level were analyzed. The ethnic/racial affiliation categories were limited to African American and Caucasian for analyses purposes because there were not enough participants to adequately represent the other ethnic/racial categories. Marital status categories were limited to married, divorced, and single because there were too few participants in the separated and widowed categories. Type of employment was converted to employment status (employed, unemployed) for the same reason. Being a student was considered 'employed'.

Whether health insurance (yes, no) was available and whether the participant resided in Murfreesboro (yes, no) were included as predictors as well. The rationale for including them is

that participants with health insurance might have more resources for recovering, and participants who resided in Murfreesboro might have fewer transportation problems.

**Criminal justice history** obtained at intake included three variables. The number of lifetime arrests and the number of arrests during the past 5 years were obtained for each person. As well, the type of charge that brought the person to drug court was recorded. For evaluation purposes, the specific charges were categorized as drug related, violation of probation, or 'other charge'.

The participants' **drug use history** was used for predicting the outcome measures. Specifically, the ASI scores at intake, the SOCRATES scores at intake, the primary drug of choice (crack/coke, alcohol, marijuana, 'other drug'), and whether the participant began using drugs before age 17 (yes, no) were used to represent drug use history. The ASI scores at intake and the SOCRATES scores at intake were not used when the outcome variables were change in ASI scores and change in SOCRATE scores.

The operational definitions for **mental health history** included three variables. First, has the person previously received outpatient treatment for mental health issues (yes, no)? Second, has the person ever been hospitalized for mental health issues (yes, no)? Third, what is the primary mental health diagnosis? The primary mental health diagnoses for the participants in this sample were categorized as anxiety, depression, substance abuse, and 'other diagnosis'. The 'other diagnosis' category included a range of diagnoses.

Finally, participants' **compliance** with required meetings were included as predictors. Attendance percentages were calculated for required self-help meetings (e.g., AA/NA), court appearances, counseling sessions, MRT classes, meetings with the probation officer, and the case manager.

## ***RESULTS***

As a reminder, the outcome evaluation sought to answer six questions: (1) Can information obtained at intake be used to predict who will graduate from the program? (2) Does being in the drug court program increase participants' willingness to change their alcohol and drug use behavior? (3) Does the drug court program help participants to reduce the severity of their addiction? (4) What information obtained at intake can be used to predict who will have difficulty remaining drug free? (5) What is the re-arrest rate for those who leave the program? (6) What information obtained at intake can be used to predict who will be re-arrested?

An alpha of .05 was used for each statistical test. The statistical procedures used and the numeric results of the statistical analyses are provided in the tables that follow. Individuals not comfortable or not interested in reading detailed statistical results may skip the tables without loss of understanding because the results are interpreted in the text that follows.

## ***Predicting Who Will Graduate from the Program***

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The variables useful for predicting who will graduate are summarized below. See Table 1 for the statistical details.

***Demographics.*** Age, gender, ethnicity, marital status, employment status, health insurance, Murfreesboro residence, and educational level were not related program status (graduated, terminated).

***Criminal History.*** A larger number of lifetime arrests and a larger number of arrests during the past 5 years were associated with being terminated. The type of charge was not related to program status.

***Drug Use History.*** Drug use before age 17 and primary drug of choice were not related to program status. Higher contemplation scores at intake were associated with being terminated. The other SOCRATES scales were not related to program status. More severe scores on the ASI family/social scale at intake were associated with graduating from the program. More severe scores on the ASI employment scale were associated with being terminated. No other ASI scales were related to program status.

***Mental Health.*** Outpatient treatment for mental health issues, hospitalization for mental health issues, and the primary mental health diagnosis were unrelated to program status.

***Compliance with the Program.*** Higher attendance percentages for required self-help meetings, court appearances, MRT classes, and meetings with the probation officer were related to graduating from the program. In contrast, attendance for counseling meetings and meetings with the case manager were not related to program status. Finally, higher percentages of positive drug screens were associated with being terminated from the drug court.

**Table 1**

**Predicting Who Will Graduate (0 = Graduated, 1 = Terminated)**

<b>Predictor</b>	<b>Test</b>	<b>Results</b>
Age (years)	Correlation	$R(70) = -.23, p = .06$
Gender	Chi-square	$\chi^2(1, N = 72) = 2.01, p = .16$
Ethnicity/Race	Chi-square	$\chi^2(1, N = 70) = 0.51, p = .47$
Marital Status	Chi-square	$\chi^2(2, N = 65) = 3.49, p = .17$
Employment Status	Chi-square	$\chi^2(1, N = 72) = 2.78, p = .10$
Health Insurance	Chi-square	$\chi^2(1, N = 72) = 3.29, p = .07$
Murfreesboro Residence	Chi-square	$\chi(1, N = 72) = 0.00, p = 1.00$
Educational Level	Chi-square	$\chi(3, N = 72) = 2.86, p = .41$
Number of Lifetime Arrests	Correlation	<b><math>r(70) = .26, p = .03</math></b>
Number of Arrests in Last 5 Years	Correlation	<b><math>r(70) = .24, p = .048</math></b>
Charge at Intake	Chi-square	$\chi^2(2, N = 70) = 1.18, p = .55$
Drug Use Before Age 17	Chi-square	$\chi^2(1, N = 72) = 2.36, p = .12$
Primary Drug of Choice	Chi-square	$\chi^2(3, N = 72) = 7.50, p = .06$
Primary Drug of Choice, excluding 'Other'	Chi-square	$\chi^2(2, N = 64) = 2.46, p = .29$
ASI Subscales	Stepwise Logistic Regression	<b><math>\chi^2(2, N = 72) = 9.93, p = .007</math></b>
Employment		<b>Employment, <math>\chi^2 = 5.27, p = .02</math></b>
Family/Social		<b>Family/Social, <math>\chi^2 = 4.03, p = .045</math></b>
SOCRATES Subscales	Stepwise Logistic Regression	<b><math>\chi^2(1, N = 72) = 4.47, p = .03</math></b>
Contemplation		
Prior Mental Health Outpatient Treatment	Chi-square	$\chi^2(1, N = 72) = 1.40, p = .24$
Prior Mental Health Hospitalization	Chi-square	$\chi^2(1, N = 72) = 0.40, p = .53$
Primary Mental Health Diagnosis	Chi-square	$\chi^2(2, N = 64) = 2.74, p = .25$
% Self-help Attendance	Logistic Regression	<b><math>\chi^2(1, N = 71) = 14.89, p = .0001</math></b>
% Counseling Attendance	Logistic Regression	$\chi^2(1, N = 70) = 3.14, p = .08$
% Court Hearings Attendance	Logistic Regression	<b><math>\chi^2(1, N = 72) = 14.58, p = .0001</math></b>
% MRT Attendance	Logistic Regression	<b><math>\chi^2(1, N = 58) = 4.60, p = .03</math></b>
% Probation Attendance	Logistic Regression	<b><math>\chi^2(1, N = 72) = 17.82, p &lt; .001</math></b>
% Case Manager Attendance	Logistic Regression	$\chi^2(1, N = 66) = 2.94, p = .09$
% Positive Drug Screens	Logistic Regression	<b><math>\chi^2(1, N = 71) = 13.64, p = .0002</math></b>

## ***Predicting Changes in the SOCRATES Scores***

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Did the SOCRATES scores change for participants while they were in the program? The precontemplation scores did not change,  $t(44) = 0.94, p = .35$ . There was a significant decrease in contemplation scores ( $M = -5.96, SD = 7.19$ ) and preparation scores ( $M = -4.42, SD = 7.28$ ),  $t(44) = 5.55, p < .0001$  and  $t(44) = 4.08, p = .0002$ , respectively. There was a significant increase in action scores ( $M = 2.18, SD = 5.61$ ) and maintenance scores ( $M = 1.96, SD = 4.57$ ) for participants,  $t(44) = 2.60, p = .0126$ , and  $t(44) = 2.87, p = .0063$ , respectively. The statistical results for variables related to changes in the SOCRATES scores are reported in Table 2.

***Demographics.*** Older participants had higher change scores on the contemplation scale than did younger participants. Participants residing in Murfreesboro ( $M = -7.52, SD = 7.06, n = 29$ ) had significantly lower difference scores for contemplation than did participants residing outside of Murfreesboro ( $M = -3.13, SD = 6.73, n = 16$ ). Caucasians had higher change scores ( $M = 3.14, SD = 5.87, n = 35$ ) for action than did African Americans ( $M = -0.38, SD = 1.60, n = 8$ ). Gender, marital status, employment status, educational level, and health insurance were not related to changes in the SOCRATES scales.

***Criminal History.*** The number of lifetime arrests and the number of arrests during the past 5 years were not related to changes in the SOCRATES scales. The type of charge at intake was related to the amount of change in both the action and maintenance scales. Change scores for action were lower for participants with an ‘other charge’ ( $M = -0.60, SD = 0.89, n = 5$ ) than for participants with a violation of probation charge ( $M = 2.66, SD = 6.40, n = 29$ ). Participants with an ‘other charge’ ( $M = -1.40, SD = 2.30, n = 5$ ) had lower change scores for the maintenance scale than did participants with a drug related charge ( $M = 4.11, SD = 3.55, n = 9$ ).

***Drug Use History.*** Beginning drug use before the age of 17 was not a predictor of change for the SOCRATES scales. Participants who preferred alcohol ( $M = 5.00, SD = 4.03, n = 10$ ) had higher action change scores than participants with coke/crack as their primary drug of choice ( $M = -0.46, SD = 2.54, n = 13$ ). When the ‘other drug’ was excluded, the primary drug of choice was related to the amount of change in both the precontemplation and action scores. Participants who preferred alcohol still had higher action change scores than participants with coke/crack as their primary drug of choice. As well, participants who preferred alcohol ( $M = 2.40, SD = 2.17, n = 10$ ) had higher precontemplation change scores than did participants who preferred marijuana ( $M = -1.93, SD = 5.73, n = 15$ ).

***Mental Health History.*** People who had never been hospitalized ( $M = 2.61, SD = 5.98, n = 38$ ) had higher action change scores than those who were hospitalized ( $M = -0.14, SD = 1.77, n = 7$ ). Primary mental health diagnosis and prior outpatient treatment were not related to change in the SOCRATES scores.

***Compliance with the Program.*** Higher attendance percentages at self-help meetings and probation officer meetings were associated with lower change scores for the action scale. Attendance for counseling meetings, court appearances, MRT classes, and case manager meetings were not related to changes in the SOCRATES scales.

**Table 2**

**Predicting Willingness to Change Behavior**

	TEST	STAT	Changes in SOCRATES Scores									
			Precontemplation		Contemplation		Preparation		Action		Maintenance	
			Value	p	Value	P	Value	p	Value	p	Value	p
Age	1	<i>r</i>	.15	.33	<b>.40</b>	<b>.006</b>	-.02	.90	-.29	.052	-.27	.07
Gender	2	<i>t</i>	0.65	.52	0.05	.96	0.86	.39	0.58	.56	0.53	.60
Ethnicity/Race	3	<i>F</i>	2.31	.16	0.45	.52	2.73	.13	<b>9.50</b>	<b>.004</b>	2.86	.11
Marital Status	3	<i>F</i>	0.60	.63	1.83	.21	0.39	.77	1.78	.19	1.14	.37
Employment	2	<i>t</i>	0.09	.93	0.20	.84	0.01	.99	1.48	.15	0.40	.69
Health Insurance	2	<i>t</i>	0.11	.91	1.19	.24	0.08	.94	0.54	.59	0.64	.53
Murfreesboro	2	<i>t</i>	0.69	.49	<b>2.06</b>	<b>.048</b>	0.01	.99	1.45	.15	1.61	.11
Educational Level	3	<i>F</i>	0.82	.50	0.88	.48	0.79	.52	0.43	.73	1.06	.39
Lifetime Arrests	1	<i>r</i>	.06	.69	.02	.90	-.06	.68	-.09	.56	.01	.94
Arrests Last 5 Years	1	<i>r</i>	-.02	.92	.06	.69	.01	.95	-.09	.56	-.04	.77
Charge at Intake	3	<i>F</i>	2.11	.17	0.14	.87	0.74	.50	<b>5.43</b>	<b>.01</b>	<b>6.19</b>	<b>.01</b>
Drug use before 17	2	<i>t</i>	0.78	.45	1.48	.15	1.31	.20	1.18	.25	0.61	.54
Primary Drug of Choice	3	<i>F</i>	2.23	.12	1.22	.33	0.52	.67	<b>4.78</b>	<b>.01</b>	1.23	.33
Primary Drug of Choice, excluding other	3	<i>F</i>	<b>3.49</b>	<b>.049</b>	1.66	.22	0.77	.47	<b>7.16</b>	<b>.005</b>	1.68	.21
Outpatient MH	2	<i>t</i>	0.10	.92	0.16	.87	0.30	.77	0.20	.84	1.60	.12
Hospitalized MH	2	<i>t</i>	1.71	.11	0.02	.99	0.44	.67	<b>2.33</b>	<b>.03</b>	1.67	.11
Primary MH Diagnosis	3	<i>F</i>	0.25	.86	2.88	.09	0.47	.71	0.96	.44	1.32	.31
% Self-help attendance	1	<i>r</i>	.24	.11	.10	.50	-.26	.09	<b>-.45</b>	<b>.002</b>	-.22	.14
% Counseling attend.	1	<i>r</i>	.07	.67	-.04	.80	-.19	.21	-.11	.48	-.03	.84
% Court attendance	1	<i>r</i>	.17	.27	.12	.43	-.21	.16	-.17	.26	-.18	.39
% MRT attendance	1	<i>r</i>	.15	.32	.13	.40	-.18	.23	-.25	.10	-.17	.28
% Probation attendance	1	<i>r</i>	.12	.45	-.05	.73	-.27	.07	<b>-.43</b>	<b>.003</b>	-.26	.08
% Case Manager attendance	1	<i>r</i>	.11	.47	-.08	.59	-.02	.89	.11	.46	.13	.41
Program Status	2	<i>t</i>	1.19	.24	0.52	.61	-0.44	.66	-1.54	.15	-1.06	.31

## ***Predicting Changes in the ASI Scores***

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Did the ASI scores change from pretest to posttest? Recall that lower scores at posttest would mean the level of severity had been reduced for participants in the drug court. The medical severity increased slightly from pretest to posttest ( $M = 1.06$ ,  $SD = 2.76$ ,  $n = 47$ ,  $t = 2.64$ ,  $p = .0113$ ). There was no change in the employment severity for participants in the drug court ( $M = -0.87$ ,  $SD = 3.00$ ,  $t = 1.99$ ,  $p = .0525$ ) or the alcohol severity of participants ( $M = -1.00$ ,  $SD = 3.48$ ,  $t = 1.97$ ,  $p = .0546$ ). The scores for drug severity, legal severity, family/social severity, and psychiatric severity were reduced from pretest to posttest. The means and standard deviations for the change scores were as follows: Drug  $M = -3.60$ ,  $SD = 2.52$ ,  $t = 9.80$ ,  $p < .0001$ ; Legal  $M = -3.09$ ,  $SD = 2.28$ ,  $t = 9.27$ ,  $p < .0001$ ; Family/Social  $M = -2.60$ ,  $SD = 3.06$ ,  $t = 5.83$ ,  $p < .0001$ ; Psychiatric  $M = -2.11$ ,  $SD = 3.09$ ,  $t = 4.67$ ,  $p < .0001$ .

See Table 3 for statistical results related to changes in ASI severity.

***Demographics.*** African Americans ( $M = -0.44$ ,  $SD = 1.33$ ,  $n = 9$ ) had a greater decrease in medical severity than Caucasians ( $M = 1.36$ ,  $SD = 2.95$ ,  $n = 36$ ). Participants unemployed at intake ( $M = -2.33$ ,  $SD = 3.07$ ,  $n = 21$ ) experienced a greater decrease in employment severity than participants employed at intake ( $M = 0.31$ ,  $SD = 2.41$ ,  $n = 26$ ). Those uninsured at intake ( $M = -1.63$ ,  $SD = 2.89$ ,  $n = 30$ ) had a larger decrease in employment severity than those with health insurance at intake ( $M = 0.47$ ,  $SD = 2.79$ ,  $n = 17$ ). Younger participants were associated with a greater decrease in alcohol severity. Females ( $M = -4.28$ ,  $SD = 2.65$ ,  $n = 25$ ) saw a greater decrease in drug severity than did males ( $M = -2.82$ ,  $SD = 2.15$ ,  $n = 22$ ). Females ( $M = -3.00$ ,  $SD = 3.08$ ,  $n = 25$ ) saw a greater decrease in psychiatric severity than males ( $M = -1.09$ ,  $SD = 2.84$ ,  $n = 22$ ). Marital status, residing in Murfreesboro, and educational level were not related to the ASI change scores.

***Criminal History.*** None of the criminal history variables (number of lifetime arrests, number of arrests in past 5 years, charge at intake) were associated with the ASI change scores.

***Drug Use History.*** Participants who began using drugs before age 17 experienced more of a decrease in alcohol severity ( $M = -2.03$ ,  $SD = 3.42$ ,  $n = 32$ ) than those who began at age 17 or later ( $M = 1.20$ ,  $SD = 2.48$ ,  $n = 15$ ). Those who began using drugs at age 17 or later ( $M = -4.07$ ,  $SD = 1.58$ ,  $n = 15$ ) had a greater decrease in legal severity than those who began using drugs before age 17 ( $M = -2.63$ ,  $SD = 2.43$ ,  $n = 32$ ). Primary drug of choice was not related to changes in the ASI scores.

***Mental Health.*** Prior outpatient treatment for mental health issues and the primary mental health diagnosis were not related to changes in the ASI scores. However, previous hospitalization for mental health issues was related to changes in alcohol, drug, legal, family/social, and psychiatric severity scores. In each case, those who had previously been hospitalized had greater decreases in severity than those who had never been hospitalized. The means and standard deviations for the 7 people who had been hospitalized are: Alcohol  $M = -4.29$ ,  $SD = 3.20$ ; Drug  $M = -5.29$ ,  $SD = 1.60$ ; Legal  $M = -4.71$ ,  $SD = 1.60$ ; Family/Social  $M = -5.00$ ,  $SD = 2.31$ ; Psychiatric  $M = -4.43$ ,  $SD = 2.44$ . The means and standard deviations for the 40 people who have never been

hospitalized are: Alcohol  $M = -0.43$ ,  $SD = 3.23$ ; Drug  $M = -3.30$ ,  $SD = 2.54$ ; Legal  $M = -2.80$ ,  $SD = 2.28$ ; Family/Social  $M = -2.18$ ,  $SD = 2.99$ ; Psychiatric  $M = -1.70$ ,  $SD = 3.04$ .

***Compliance with the Program.*** The counseling percentage was related to change in legal severity. However, inspection of a scatterplot of the two variables showed that there was one person who attended less than 70% of the counseling attendance meetings and had a large increase in legal severity. When this one person was omitted from the analysis, there was no relationship between counseling attendance and legal severity ( $r = -.025$ ,  $p = .87$ ).

The attendance percentage for required court meetings was related to changes in employment and alcohol severity. Attending more court meetings was associated with a larger decrease in employment severity and a smaller decrease in alcohol severity. Attendance for self-help meetings, MRT classes, probation officer, and case manager meetings were not related to changes in ASI scores.

Program status (graduated, terminated) was associated with changes in drug, legal, and family/social severity. In each case, graduates experienced a greater drop in severity than did participants who were terminated. The means for the 36 graduates were: Drug  $M = -4.17$ ,  $SD = 1.92$ ; Legal  $M = -3.64$ ,  $SD = 2.00$ ; Family/Social  $M = -3.17$ ,  $SD = 2.83$ . The means for the 11 terminated individuals were: Drug  $M = -1.73$ ,  $SD = 3.35$ ; Legal  $M = -1.27$ ,  $SD = 2.28$ ; Family/Social  $M = -0.73$ ,  $SD = 3.13$ .

**Table 3**  
**Predicting Changes in Addiction Severity**

	Test <sup>a</sup>	Stat	Changes in Addiction Severity Index (ASI)													
			Medical		Employment		Alcohol		Drug		Legal		Family/Social		Psychiatric	
			Value	p	Value	p	Value	P	Value	p	Value	P	Value	p	Value	p
Age (years)	1	<i>r</i>	-.06	.67	.02	.92	<b>.33</b>	<b>.03</b>	.05	.72	-.17	.25	-.20	.17	.12	.43
Gender	2	<i>t</i>	0.17	.87	1.72	.09	0.00	1.00	<b>2.08</b>	<b>.04</b>	0.62	.54	1.44	.16	<b>2.21</b>	<b>.03</b>
Ethnicity/Race	3	<i>F</i>	<b>7.43</b>	<b>.01</b>	0.21	.66	0.08	.79	0.06	.81	2.92	.10	0.25	.62	1.47	.25
Marital Status	3	<i>F</i>	0.57	.65	0.49	.70	0.48	.70	0.79	.52	0.54	.67	1.65	.23	0.03	.99
Employment	2	<i>t</i>	0.35	.73	<b>3.22</b>	<b>.003</b>	0.16	.87	0.28	.78	1.03	.31	0.05	.96	1.48	.15
Health Insurance	2	<i>t</i>	0.23	.82	<b>2.45</b>	<b>.02</b>	0.66	.52	1.11	.28	1.11	.28	0.11	.91	0.95	.35
Murfreesboro	2	<i>t</i>	0.23	.82	0.68	.50	0.56	.58	1.75	.09	1.75	.09	1.95	.06	0.77	.45
Educational Level	3	<i>F</i>	2.68	.08	1.09	.38	1.27	.32	1.33	.30	1.57	.23	1.81	.18	2.32	.11
Lifetime Arrests	1	<i>r</i>	.14	.34	-.09	.55	-.11	.48	-.04	.78	-.10	.49	-.03	.86	.10	.50
Arrests Last 5 Years	1	<i>r</i>	.07	.63	-.13	.39	-.10	.51	-.09	.56	-.14	.34	.04	.80	.05	.72
Charge at Intake	3	<i>F</i>	0.70	.52	3.28	.08	0.68	.53	1.10	.36	2.68	.11	1.73	.21	1.41	.28
Drug use before 17	2	<i>t</i>	1.15	.26	1.29	.21	<b>3.66</b>	<b>.0008</b>	0.71	.48	<b>2.43</b>	<b>.02</b>	0.86	.40	1.41	.17
Primary Drug of Choice	3	<i>F</i>	1.80	.18	0.37	.77	0.33	.80	0.39	.76	2.51	.09	0.27	.85	1.14	.36
Primary Drug of Choice, excluding other	3	<i>F</i>	2.01	.16	0.44	.65	0.42	.66	0.45	.65	1.28	.30	0.26	.77	1.60	.22
Outpatient MH	2	<i>t</i>	0.79	.43	0.69	.50	0.66	.51	1.31	.20	1.68	.10	0.99	.33	0.61	.54
Hospitalized MH	2	<i>t</i>	1.29	.23	0.73	.49	<b>2.94</b>	<b>.02</b>	<b>2.73</b>	<b>.02</b>	<b>2.72</b>	<b>.02</b>	<b>2.84</b>	<b>.02</b>	<b>2.62</b>	<b>.03</b>
Primary MH Diagnosis	3	<i>F</i>	0.58	.64	0.24	.87	0.22	.88	0.28	.84	0.59	.63	1.72	.21	1.86	.19
% AA/NA attend.	1	<i>r</i>	.03	.83	-.03	.85	-.06	.70	-.22	.14	-.24	.10	-.18	.22	-.03	.82
% Counseling attend.	1	<i>r</i>	-.07	.65	.16	.28	-.03	.85	-.07	.63	<b>-.32</b>	<b>.03</b>	-.07	.62	.04	.77
% Court attendance	1	<i>r</i>	.01	.93	<b>-.34</b>	<b>.02</b>	<b>.36</b>	<b>.01</b>	.05	.75	-.20	.17	-.11	.46	-.08	.57
% MRT attendance	1	<i>r</i>	.06	.69	-.04	.81	.08	.57	-.20	.17	.004	.98	-.13	.39	-.10	.50
% Probation attend.	1	<i>r</i>	-.04	.77	-.10	.51	-.05	.72	-.25	.08	-.20	.18	-.12	.44	-.11	.47
% Case Manager attendance	1	<i>r</i>	.02	.91	.002	.99	.11	.46	.006	.97	.03	.82	.05	.73	-.15	.32
Program Status	2	<i>t</i>	1.61	.13	.05	.96	1.53	.14	<b>2.30</b>	<b>.04</b>	<b>3.09</b>	<b>.007</b>	<b>2.31</b>	<b>.04</b>	0.62	.55

<sup>a</sup>1 = correlation; 2 = Welch's t test; 3 = Welch's Anova

## ***Predicting Positive Drug Screens During the First 180 Days***

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Table 4 contains the statistical results for predicting the percentage of positive drug screens during the first 180 days of being in the drug court program. The interpretations of Table 4 are provided below.

***Demographics.*** Caucasians ( $M = 21.82$ ,  $SD = 25.19$ ,  $n = 54$ ) had significantly more positive drug screens during the first 180 days than African Americans ( $M = 10.80$ ,  $SD = 11.46$ ,  $n = 13$ ). Age, gender, marital status, employment status, health insurance, residing in Murfreesboro, and educational level were not related to the percentage of positive drug screens during the first 180 days.

***Criminal History.*** The number of lifetime arrests, the number of arrests during the past 5 years, and the type of charge were not related to the percentage of positive drug screens during the first 180 days.

***Drug Use History.*** Individuals who began using drugs before the age of 17 ( $M = 22.37$ ,  $SD = 25.25$ ,  $n = 50$ ) had a higher percentage of positive drug screens during the first 180 days of drug court than did individuals who began using drugs at age 17 or later ( $M = 12.07$ ,  $SD = 14.60$ ,  $n = 19$ ). The individuals' primary drug of choice was not a useful predictor of the positive drug screens during the first 180 days. Higher scores on the psychiatric scale of the ASI at intake were associated with a larger percentage of positive drug screens. None of the other ASI scales were related, and none of the SOCRATES scales were related to the percentage of positive drug screens for the 180 days.

***Mental Health.*** Prior outpatient mental health treatment and prior hospitalization for mental health issues were not related to the percentage of positive drug screens during the first 180 days. Individuals diagnosed with anxiety ( $M = 35.91$ ,  $SD = 28.03$ ,  $n = 13$ ) had a significantly higher percentage of positive drug screens than those with substance abuse ( $M = 11.86$ ,  $SD = 15.65$ ,  $n = 34$ ) as the primary diagnosis.

***Compliance with the Program.*** The attendance percentage at required self-help meetings, MRT meetings, and meetings with the probation officer were negatively related to the percentage of positive drug screens during the first 180 days. The attendance percentage at required counseling, court, and case manager meetings were not related to the percentage of positive drug screens during the first 180 days. Of course, participants who were terminated ( $M = 26.97$ ,  $SD = 26.25$ ,  $n = 33$ ) had significantly more positive drug screens during the first 180 days than did the participants who graduated ( $M = 12.72$ ,  $SD = 17.73$ ,  $n = 36$ ).

**Table 4**

**Predicting % of Positive Drug Screens During First 180 Days**

<b>Predictor</b>	<b>Statistical Test</b>	<b>Results</b>
Age (years)	Correlation	$r(67) = -.045, p = .71$
Gender	Welch $t$ test	$t(57.2) = 0.71, p = .48$
Ethnicity/Race	Welch $t$ test	<b><math>t(43) = 2.36, p = .02</math></b>
Marital Status	Welch Anova	$F(2, 14.6) = 0.04, p = .99$
Employment Status	Welch $t$ test	$t(62) = 0.06, p = .95$
Health Insurance	Welch $t$ test	$t(26.7) = 1.36, p = .18$
Murfreesboro Residence	Welch $t$ test	$t(67) = 1.24, p = .22$
Educational Level	Welch Anova	$F(3, 24.9) = 0.43, p = .74$
Number of Lifetime Arrests	Correlation	$r(67) = .098, p = .42$
Number of Arrests Last 5 Years	Correlation	$r(67) = -.04, p = .72$
Charge at Intake	Welch Anova	$F(2, 24.3) = 0.20, p = .82$
Drug Use Before Age 17	Welch $t$ test	<b><math>t(55.7) = 2.10, p = .04</math></b>
Primary Drug of Choice	Welch Anova	$F(3, 31.9) = 2.58, p = .07$
Primary Drug of Choice, excluding 'Other'	Welch Anova	$F(2, 31.6) = 2.99, p = .07$
ASI Subscales Psychiatric	Stepwise Linear Regression	<b><math>F(1, 67) = 4.26, p = .04</math></b>
SOCRATES Subscales	Stepwise Linear Regression	None were significant.
Prior Mental Health Outpatient Treatment	Welch $t$ test	$t(60.8) = 1.33, p = .19$
Prior Mental Health Hospitalization	Welch $t$ test	$t(14.8) = 0.83, p = .42$
Primary Mental Health Diagnosis	Welch Anova	<b><math>F(3, 19.6) = 3.12, p = .049</math></b>
% Self-help Attendance	Correlation	<b><math>r(66) = -.38, p = .001</math></b>
% Counseling Attendance	Correlation	$r(66) = -.14, p = .26$
% Court Hearings Attendance	Correlation	$r(67) = .033, p = .79$
% MRT Attendance	Correlation	<b><math>r(55) = -.48, p = .0001</math></b>
% Probation Attendance	Correlation	<b><math>r(67) = -.38, p = .001</math></b>
% Case Manager Attendance	Correlation	$r(63) = -.0040, p = .97$
Program Status	Welch $t$ test	<b><math>t(55.5) = 2.62, p = .01</math></b>

## ***Predicting Positive Drug Screens for the Entire Program***

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The statistical results for predicting the percentage of total positive drug screens are provided in Table 5. The results are interpreted below.

***Demographics.*** African Americans ( $M = 9.57$ ,  $SD = 11.15$ ,  $n = 13$ ) had a lower percentage of positive drug screens than did Caucasians ( $M = 20.73$ ,  $SD = 24.43$ ,  $n = 54$ ). Age, gender, marital status, employment status, health insurance, and educational level were not related to the percentage of total positive drug screens.

***Criminal History.*** The number of lifetime arrests, the number of arrests during the past 5 years, and the type of charge at time of entry to drug court were not related to the percentage of total positive drug screens.

***Drug Use History.*** Participants who began using drugs before the age of 17 ( $M = 21.53$ ,  $SD = 24.60$ ,  $n = 50$ ) had a significantly higher percentage of total positive drug screens than did individuals who began using drugs at age 17 or older ( $M = 9.62$ ,  $SD = 13.01$ ,  $n = 19$ ). The participants' primary drug of choice was not related to the percentage of positive drug screens. Omitting the 'other drug' category lead to a significant difference in the percentage of total positive drug screens for the Welch Anova, but none of the pairwise comparisons were significantly different. The psychiatric scores (ASI) at intake were positively correlated with the percentage of total positive drug screens. No other ASI scales were related. None of the SOCRATES scales were related to positive drug screens.

***Mental Health.*** The primary mental health diagnosis, outpatient treatment for mental health reasons, and hospitalization for mental health reasons were not related to the percentage of total positive drug screens.

***Compliance with the Program.*** Higher attendance at self-help meetings, MRT, and meetings with probation officers were associated with lower percentages of positive drug screens. Participants who were terminated ( $M = 26.86$ ,  $SD = 25.48$ ,  $n = 33$ ) had a significantly higher percentage of total positive drug screens than participants who graduated ( $M = 10.36$ ,  $SD = 16.21$ ,  $n = 36$ ). The attendance percentages for required counseling, case manager, and court related meetings were not useful for predicting the percentage of total positive drug screens.

**Table 5**

**Predicting % of Total Positive Drug Screens**

<b>Predictor</b>	<b>Statistical Test</b>	<b>Results</b>
Age (years)	Correlation	$r(67) = -.10, p = .42$
Gender	Welch $t$ test	$t(57.7) = 0.60, p = .55$
Ethnicity/Race	Welch $t$ test	$t(42.8) = 2.46, p = .02$
Marital Status	Welch Anova	$F(2, 14.4) = 0.07, p = .97$
Employment Status	Welch $t$ test	$t(61.2) = 0.24, p = .81$
Health Insurance	Welch $t$ test	$t(27.9) = 1.10, p = .28$
Murfreesboro Residence	Welch $t$ test	$t(66.3) = 0.89, p = .38$
Educational Level	Welch Anova	$F(3, 25.0) = 0.37, p = .77$
Number of Lifetime Arrests	Correlation	$r(67) = .13, p = .29$
Number of Arrests in Last 5 Years	Correlation	$r(66) = -.0024, p = .98$
Charge at Intake	Welch Anova	$F(2, 23.5) = 0.10, p = .90$
Drug Use Before Age 17	Welch $t$ test	$t(59.7) = 2.60, p = .01$
Primary Drug of Choice	Welch Anova	$F(3, 24.7) = 2.39, p = .09$
Primary Drug of Choice, excluding 'Other'	Welch Anova	$F(2, 30.6) = 3.57, p = .04$
ASI Subscales PSYCH	Stepwise Linear Regression	$F(1, 67) = 4.86, p = .03$
SOCRATES Subscales	Stepwise Linear Regression	None were selected
Prior Mental Health Outpatient Treatment	Welch $t$ test	$t(60.4) = 1.49, p = .14$
Prior Mental Health Hospitalization	Welch $t$ test	$t(14.0) = 0.59, p = .56$
Primary Mental Health Diagnosis	Welch Anova	$F(3, 20.4) = 2.37, p = .10$
% Self-help Attendance	Correlation	$r(66) = -.37, p = .002$
% Counseling Attendance	Correlation	$r(66) = -.15, p = .21$
% Court Hearings Attendance	Correlation	$r(67) = .024, p = .84$
% MRT Attendance	Correlation	$r(55) = -.51, p = .0001$
% Probation Attendance	Correlation	$r(67) = -.40, p = .0007$
% Case Manager Attendance	Correlation	$r(63) = -.013, p = .92$
Program Status	Welch $t$ test	$t(53.4) = 3.17, p = .003$

## ***Predicting In-program Arrests***

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There were 72 individuals who have left the drug court program. Fifteen of the 72 individuals (20.8%) were arrested while in the drug court program. See Table 6 for statistical results related to in-program arrests.

***Demographics.*** Fewer females (10.5%) than males (32.4%) were arrested in the program. Age, ethnicity, marital status, and educational level were not significant predictors of in-program arrests. Additionally, employment status, residence in Murfreesboro, and health insurance were not related to in-program arrests.

***Criminal History.*** A larger number of lifetime arrests was associated with having an in-program arrest. The number of arrests during the past 5 years was not a predictor of in-program arrests nor was the type of charge that brought the person to drug court.

***Drug Use History.*** Twenty-eight percent of participants who began their drug use before the age of 17 were arrested while in the program. In contrast, 4.6% of the participants who began their drug use at the age of 17 or later were arrested while in the program. The primary drug of choice was not related to having an in-program arrest. The ASI scales and the SOCRATES scales were not related to having an in-program arrest.

***Mental Health.*** Prior outpatient mental health treatment, prior hospitalization for a mental health issue, and the primary mental health diagnosis were not related to having an in-program arrest.

***Compliance with the Program.*** Higher attendance percentages at self-help meetings were associated with a decreased likelihood of having an in-program arrest. Fewer participants who graduated (5.6%) had an in-program arrest than did participants who were terminated (36.1%). Counseling attendance, court attendance, probation officer attendance, MRT attendance, and case manager attendance were not related to having an in-program arrest.

**Table 6**

**Predicting Whether the Participant Was Arrested While in the Program (1=Yes, 0 = No)**

<b>Predictor</b>	<b>Statistical Test</b>	<b>Results</b>
Age (years)	Logistic Regression	$\chi^2 (1, N = 72) = 0.52, p = .47$
Gender	Chi-square	$\chi^2 (1, N = 72) = 5.18, p = .02$
Ethnicity/Race	Chi-square	$\chi^2 (1, N = 70) = 0.36, p = .55$
Marital Status	Chi-square	$\chi^2 (2, N = 65) = 0.37, p = .83$
Employment Status	Chi-square	$\chi^2 (1, N = 72) = 0.10, p = .75$
Health Insurance	Chi-square	$\chi^2 (1, N = 72) = 0.77, p = .38$
Murfreesboro Residence	Chi-square	$\chi^2 (1, N = 72) = 3.66, p = .06$
Educational Level	Chi-square	$\chi^2 (3, N = 72) = 1.41, p = .70$
Number of Lifetime Arrests	Logistic Regression	$\chi^2 (1, N = 72) = 4.64, p = .031$
Number of Arrests Last 5 Years	Logistic Regression	$\chi^2 (1, N = 71) = 0.87, p = .35$
Charge at Intake	Chi-square	$\chi^2 (1, N = 70) = 0.85, p = .65$
Drug Use Before Age 17	Chi-square	$\chi^2 (1, N = 72) = 5.10, p = .02$
Primary Drug of Choice	Chi-square	$\chi^2 (3, N = 72) = 4.20, p = .24$
Primary Drug of Choice, excluding 'Other'	Chi-square	$\chi^2 (2, N = 64) = 1.69, p = .43$
ASI Subscales	Stepwise Logistic Regression	None were selected
SOCRATES Subscales	Stepwise Logistic Regression	None were selected
Prior Mental Health Outpatient Treatment	Chi-square	$\chi^2 (1, N = 72) = 0.0053, p = .94$
Prior Mental Health Hospitalization	Chi-square	$\chi^2 (1, N = 72) = 0.15, p = .70$
Primary Mental Health Diagnosis	Chi-square	$\chi^2 (3, N = 72) = 2.91, p = .41$
% Self-help Attendance	Logistic Regression	$\chi^2 (1, N = 71) = 8.87, p = .003$
% Counseling Attendance	Logistic Regression	$\chi^2 (1, N = 70) = 1.62, p = .20$
% Court Hearings Attendance	Logistic Regression	$\chi^2 (1, N = 72) = 0.14, p = .14$
% MRT Attendance	Logistic Regression	$\chi^2 (1, N = 58) = 0.24, p = .62$
% Probation Attendance	Logistic Regression	$\chi^2 (1, N = 72) = 3.47, p = .06$
% Case Manager Attendance	Logistic Regression	$\chi^2 (1, N = 66) = 0.13, p = .71$
Program Status	Chi-square	$\chi^2 (1, N = 72) = 10.19, p = .001$

## ***Re-arrest Estimates***

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A recent national survey of 2000 drug court *graduates* from over 100 drug courts estimated the one year recidivism rate to be 16.4% and the two year recidivism rate to be 27.5%. The definition of recidivism excluded arrests unless the arrests lead to at least a one year sentence.

A report released by the Tennessee Department of Corrections (released March 20, 2001) gives recidivism rates for felons based on the type of release. The data were obtained for the time period 1993-1999. The definition of recidivism used was re-incarceration for a probation or parole violation, a new conviction, or a court-ordered return to incarceration. The estimates were:

- Felons released to parole, 28% fail within one year, 48% fail within two years;
- Felons released to probation, 23% fail within one year, 40% fail within two years;

It was not possible to use either the national definition or the Tennessee definition for recidivism because most of the cases against the drug court graduates and those terminated had not been resolved at the time of the outcome evaluation. Therefore, this outcome evaluation has focused only on re-arrest rates—which is a broader definition for recidivism.

The *one year re-arrest estimates* for persons who left the drug court program at least 12 months ago are:

- 25.8% (8 of 31) for persons admitted to drug court (graduates & terminated);
- 14.3% (1 of 7) for graduates;
- 29.2% (7 of 24) for persons terminated from drug court.

The *two year re-arrest estimates* for persons who left the program at least 24 months ago are:

- 20% (1 of 5) for all persons admitted to drug court (graduated & terminated);
- 0% for graduates;
- 20% (1 of 5) for persons terminated from drug court.

No one has been out of the program for three years or more.

## ***Predicting Out-of-program Arrests***

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The analyses described below are based on out-of-program arrests, whether the people have been arrested since leaving the drug court—regardless of the time they have been out of the program (see Table 7). The arrest rate for out-of-program arrests was the same as the in-program arrests. Fifteen of the 72 individuals, 20.8%, have been arrested since leaving the drug court. It is important to note that although the rates are identical for in-program and out-of-program arrests, some people arrested while in the program have not been arrested since leaving the program. Twenty-six of the 72 individuals, 36.1%, have been arrested since being admitted to drug court (i.e., in-program or out-of-program).

***Demographics.*** More participants who had a GED (50.0%) were arrested out-of-program than were participants who had less than a high school degree (9.7%). Age, gender, ethnicity, marital status, employment status, health insurance, and Murfreesboro residence were not related to the having an out-of-program arrest.

***Criminal History.*** A larger number of lifetime arrests and a larger number of arrests during the past 5 years were associated with being arrested after leaving the program. The type of charge was not related to being arrested after leaving the drug court program.

***Drug Use History.*** Beginning drug use before the age of 17, primary drug of choice, the SOCRATES intake scores, and the ASI intake scores were not related to being arrested after leaving the drug court program.

***Mental Health.*** Receiving outpatient mental health treatment, receiving hospitalization for mental health reasons, and the primary mental health diagnosis were not related to being arrested after leaving the drug court program.

***Compliance with the Program.*** The attendance percentages for self-help, counseling, court, probation, MRT, and case worker required meetings could not predict whether a person would be arrested after leaving the drug court program. Further, program status was not related to the likelihood that a participant would be arrested after leaving the drug court.

**Table 7**

**Predicting Whether the Participant Was Arrested After Leaving the Program (1=Yes, 0 = No)**

<b>Predictor</b>	<b>Statistical Test</b>	<b>Results</b>
Age (years)	Logistic Regression	$\chi^2 (1, N = 72) = 0.004, p = .95$
Gender	Chi-square	$\chi^2 (1, N = 72) = 1.24, p = .27$
Ethnicity/Race	Chi-square	$\chi^2 (1, N = 70) = 0.53, p = .47$
Marital Status	Chi-square	$\chi^2 (2, N = 65) = 0.14, p = .93$
Employment Status	Chi-square	$\chi^2 (1, N = 72) = 0.07, p = .79$
Health Insurance	Chi-square	$\chi^2 (1, N = 72) = 0.77, p = .38$
Murfreesboro Residence	Chi-square	$\chi^2 (1, N = 72) = 0.19, p = .66$
Educational Level	Chi-square	<b><math>\chi^2 (3, N = 72) = 9.97, p = .0188</math></b>
Number of Lifetime Arrests	Logistic Regression	<b><math>\chi^2 (1, N = 72) = 4.02, p = .045</math></b>
Number of Arrests Last 5 Years	Logistic Regression	<b><math>\chi^2 (1, N = 71) = 4.00, p = .046</math></b>
Charge at Intake	Chi-square	$\chi^2 (2, N = 70) = 0.85, p = .65$
Drug Use Before Age 17	Chi-square	$\chi^2 (1, N = 72) = 0.99, p = .32$
Primary Drug of Choice	Chi-square	$\chi^2 (3, N = 72) = 1.57, p = .67$
Primary Drug of Choice, excluding 'Other'	Chi-square	$\chi^2 (2, N = 64) = 1.14, p = .56$
ASI Subscales	Stepwise Logistic Regression	None were selected.
SOCRATES Subscales	Stepwise Logistic Regression	None were selected.
Prior Mental Health Outpatient Treatment	Chi-square	$\chi^2 (1, N = 72) = 0.43, p = .51$
Prior Mental Health Hospitalization	Chi-square	$\chi^2 (1, N = 72) = 1.36, p = .24$
Primary Mental Health Diagnosis	Chi-square	$\chi^2 (3, N = 72) = 0.17, p = .98$
% AA/NA Attendance	Logistic Regression	$\chi^2 (1, N = 71) = 0.11, p = .74$
% Counseling Attendance	Logistic Regression	$\chi^2 (1, N = 70) = 0.86, p = .35$
% Court Hearings Attendance	Logistic Regression	$\chi^2 (1, N = 72) = 0.0022, p = .96$
% MRT Attendance	Logistic Regression	$\chi^2 (1, N = 58) = 0.29, p = .60$
% Probation Attendance	Logistic Regression	$\chi^2 (1, N = 72) = 0.046, p = .83$
% Case Manager Attendance	Logistic Regression	$\chi^2 (1, N = 66) = 0.18, p = .67$
Program Status	Chi-square	$\chi^2 (1, N = 72) = 0.76, p = .38$

## *CONCLUSION*

**Was the drug court effective?** The addiction severity of participants decreased significantly for drug, legal, family/social, and psychiatric related issues. The decrease in severity was even more dramatic for those participants who had been previously hospitalized for mental health issues. The contemplation and preparation scales of the SOCRATES decreased while the action and maintenance scales increased; this suggests the drug court participants were moving from the earlier stages to the more advanced stages of willingness to change their drug and alcohol behavior. Participants who graduated from the drug court were half as likely to be rearrested within 12 months of being released as those who were terminated (14.3% vs. 29.2%).

The national and state recidivism estimates were based on different definitions than the drug court. Since the drug court used a less-restrictive definition of recidivism (i.e., any re-arrest) than the national and Tennessee definitions, some tentative observations can still be made. First, the one-year re-arrest rate for drug court graduates (14.3%) was comparable to the national recidivism rate for drug court graduates (16.4%) and lower than the Tennessee recidivism rates for those released to parole (28%) and to probation (23%). Second, the one-year re-arrest rate for those terminated from the drug court (29%) was comparable to the Tennessee recidivism rate for those released to parole. It was slightly higher than the Tennessee recidivism rate for those released to probation (23%), but the discrepancy might be explained by Tennessee's more restrictive definition of recidivism. Once the drug court has more graduates and participants who are terminated from the program, it may be possible to use a more comparable definition of recidivism—allowing for a better evaluation of recidivism rates.

**What participant subgroups might need additional or different services?** Participants who began drug use before the age of 17 had a higher percentage of positive drug screens during the program and more in-program arrests than those who began using at an older age. Participants who had a large number of arrests prior to drug court entry were more likely to have an in-program arrest, an out-of-program arrest, and more likely to be terminated.

**How important is program compliance?** Higher attendance percentages were associated with a greater likelihood of graduating, larger decreases in employment severity, fewer positive drug screens, and a decreased likelihood of having an in-program arrest. Higher attendance percentages were associated with smaller decreases in alcohol severity and less change for the SOCRATES action scale. The outcome evaluation design is purely correlational, so it not appropriate to say that increasing program compliance will result in increased success. Nevertheless, program compliance (i.e., attendance at required meetings) was a significant predictor for most of the outcome measures.

**In conclusion,** individuals admitted to the drug court have shown an improved quality of life, i.e., reduced addiction severity and improved willingness to change their drug and alcohol behavior. Participants who graduated from the drug court have demonstrated reduced substance use and reduced arrest rates compared to those who were terminated. The one year re-arrest rates look favorable for the drug court as well. That said, a longer time period is needed to obtain a more reliable recidivism estimate for the drug court.