



Article

The Effects of Race and Ethnicity on Admission, Graduation, and Recidivism in the Milwaukee County Adult Drug Treatment Court

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Abstract: Drug courts play a key role in the criminal justice system by diverting individuals from incarceration and providing them with resources to address substance use issues and reduce criminal recidivism. However, it is unclear whether drug courts reflect—or even exacerbate—preexisting racial/ethnic disparities in the criminal justice system. While prior literature has offered some insight into the influence of race and ethnicity on drug court success, much of the focus has been on outcomes (i.e., program completion and recidivism) rather than disparities at earlier stages (i.e., referral to admittance). The current study adds to this body of research by evaluating the Milwaukee County Adult Drug Treatment Court to examine whether racial/ethnic disparities exist at several stages of the drug court process: (1) referral to admittance, (2) likelihood of graduation, and (3) likelihood of recidivism. Results of the analyses determined racial/ethnic disparities in the likelihood of admission to the drug court, as well as the likelihood of graduation. There were no racial/ethnic disparities found in the likelihood of recidivism. The analyses also identified several additional variables that were influential in the likelihood of admission (risk score, prior record), likelihood of graduation (age, prior record, custody sanctions), and recidivism (drug court outcome).

Keywords: drug court; race and ethnicity; disparities; admission; graduation; recidivism



Citation: Sheeran, Alyssa M., and Amanda J. Heideman. 2021. The Effects of Race and Ethnicity on Admission, Graduation, and Recidivism in the Milwaukee County Adult Drug Treatment Court. *Social Sciences* 10: 261. <https://doi.org/10.3390/socsci10070261>

Academic Editors: Nigel Parton, Tina Freiburger and Kareem Jordan

Received: 30 April 2021

Accepted: 1 July 2021

Published: 8 July 2021

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The “War on Drugs” of the 1980s ushered in an era of policies and practices that dramatically increased drug-related arrests and incarceration rates (Marlowe 2013; McElrath et al. 2016). This initiative was costly, had little impact on criminal recidivism¹ and disproportionately affected racial/ethnic minorities (Caulkens and Chandler 2006; Green and Winik 2010; Iguchi et al. 2005; Jensen et al. 2004; Marlowe 2013; Pew Center on the States 2011). While African Americans comprise only 13% of the U.S. population, they make up nearly 40% of those incarcerated in state and federal prisons for drug-related offenses; and Hispanic/Latinos, who make up roughly 18% of the population, comprise 38% of those incarcerated for drug offenses (Drug Policy Alliance 2018).

Drug courts emerged throughout the United States as one alternative to the pressure of addressing racial/ethnic disparities that were exacerbated by the War on Drugs (Franco 2010; O’Hear 2009). Drug courts are designed to alleviate the demand of drug-related cases on the court system, reduce incarceration, and provide a more cost-effective means of controlling drug offenders (Drug Court Programs Office 1997; Goldkamp 1994; Marlowe et al. 2016). In these programs, the judge leads a multidisciplinary team of personnel that typically includes representatives from the prosecutor and defense attorney’s offices, case management, and treatment agencies, among others. Under the supervision of this team, individuals engage in an individualized treatment plan (Dannerbeck et al. 2006; Guastafarro 2012; Marchand et al. 2006) and targeted resources in the community to address their substance abuse issues and other needs. Upon successful completion of the program requirements, participants can have their criminal charge(s) either reduced or dismissed (Marlowe 2013; Marlowe et al. 2016).

Research examining the effectiveness of drug courts has largely concluded that drug courts have significantly more positive outcomes (i.e., higher completion rates and lower recidivism rates) than other forms of criminal justice interventions (Kaeble et al. 2015; Marlowe et al. 2016; U.S. Government Accountability Office 2011). However, despite the popularity and appeal of the drug court model, controversy has continued to center around the question of what potential impacts drug courts have on preexisting racial/ethnic disparities in the criminal justice system. Nationwide, minority drug offenders continue to be underrepresented in drug courts despite their overrepresentation within jails and prisons (Bureau of Justice Assistance 2012; Huddleston and Marlowe 2011; Marlowe et al. 2016). In response to this issue, the National Association of Drug Court Professionals (2010) directed drug courts across the U.S. to examine whether unwarranted racial and/or ethnic disparities existed in their programs, but there remains little consensus within the drug court literature when it comes to the presence and consequences of racial and ethnic disparities in these contexts. Further, the majority of this literature has been focused on later stages of the drug court process (i.e., graduation and recidivism). While it is important to uncover the existence—and potential impacts—of disparities at these stages, it is also critical to extend the lens of analysis to earlier stages of the drug treatment court process where consequential disparities might also occur, such as the referral-to-admittance stage.

The present study seeks to build on the current literature by examining the influence of race and ethnicity at several stages of the drug court process: (1) referral to admittance, (2) likelihood of graduation, and (3) likelihood of recidivism. Using data from the Milwaukee County Adult Treatment Court (MCADTC), this analysis tests for the presence of racial/ethnic disparities in the likelihood of admission to the drug court, the likelihood of graduation, and the likelihood of recidivism. In addition to providing a comprehensive examination of multiple stages of the drug treatment court process, the results of this analysis also have important policy implications that might potentially improve equity and inclusion for various groups of drug-involved offenders.

1. Race and Ethnicity in the Drug Court Context: A Literature Review

1.1. Discretion and Disparities at the Referral and Admittance Stage

Drug courts target offenders for admission who have been identified as having a substance abuse issue and are at a substantial risk for reoffending or failing to complete less-intensive rehabilitative dispositions (e.g., standard probation). Individuals who are identified as potential candidates are assessed for eligibility using validated risk-assessment and clinical-assessment tools, as well as criminal history evaluations (National Association of Drug Court Professionals 2018a). While the intent of this process is to provide objective eligibility and exclusion criteria, scholars have argued that the criteria for admission, both formal (paper or legal eligibility) and informal “suitability assessments” unfairly exclude minorities from participation (Marlowe 2013; O’Hear 2009). Further complicating matters, a “gatekeeper” (i.e., prosecuting attorney, drug court team member) has primary responsibility for case review and decision making at each stage of the admissions process. Each of these individuals may have different incentives to accept or reject potential participants, thus increasing the potential for selection bias (Belenko et al. 2011; Redlich et al. 2010).

Despite these issues and the fact that early referral and admission stages represent critical access points for participation in drug court programs, few studies have rigorously examined whether significant patterns of racial/ethnic disparities occur. In one study that does examine early stages of the process, Nicosia et al. (2013) investigated racial/ethnic disparities in the rate of diversion to drug treatment. Using a sample of males arrested for drug offenses in California (1995–2005), the authors found significant racial/ethnic disparities between a prison sentence or diversion to drug treatment, even after including controls for current arrest and criminal history. Specifically, the odds of Black (OR = range 0.41–0.68) and Hispanic (OR = range 0.63–0.76) defendants receiving diversion to drug treatment were significantly lower compared to White defendants. Further, in the period

following the passage of California's Proposition 36 (Prop36)², the authors found that these disparities decreased somewhat, but remained statistically significant (Nicosia et al. 2013).

1.2. Race and Ethnicity and Program Completion

Even after being admitted, not everyone successfully completes the requisite drug court program. Nation-wide, about 50% to 70% of participants graduate from an adult drug treatment court (DeMatteo et al. 2009). However, this rate may not be consistent for all participants and often differs (sometimes drastically) for various racial/ethnic groups. Numerous studies have determined that African Americans and Hispanic/Latinos graduate at significantly lower rates than Caucasians (Brewster 2001; Gray and Saum 2005; Hartley and Phillips 2001; Marlowe 2013; Schiff and Terry 1997; Sechrest and Shicor 2001). In fact, several studies have found the magnitude of these discrepancies to be as high as 25% to 40% (Belenko 2001; Sechrest and Shicor 2001; Wiest et al. 2007).

While many studies have determined the presence of racial/ethnic disparities in drug court outcomes, there are still other jurisdictions that contradict this pattern. For instance, Brown (2011) found better outcomes in a drug court for African Americans and other minorities than for non-minorities. Logan et al. (2000) also found in their study of a Kentucky drug court that two-thirds of participants who graduated were African American. Additional studies have also revealed no evidence of a relationship between race/ethnicity and drug court completion. (Butzin et al. 2002; Cissner et al. 2013; Fradella et al. 2009; Mateyoke-Scrivner et al. 2004; McKean and Warren-Gordon 2011).

In instances where racial/ethnic disparities in drug court completion are present, the underlying mechanism causing these disparities remains an unanswered question. Several scholars have suggested that race may be intercorrelated with other factors such as socioeconomic differences, employment, education, drug of choice, or criminal history (Brewster 2001; Butzin et al. 2002; Dannerbeck et al. 2006; Hartley and Phillips 2001; Schiff and Terry 1997). In a study of ten Missouri adult drug courts, Dannerbeck et al. (2006) found that Caucasians were significantly more likely to graduate than African Americans (55% vs. 28%, respectively); yet, these differences were mediated by employment, primary drug of choice, family support, and socioeconomic status³. The emerging body of research presenting mixed findings on this relationship calls for additional research into the possible racial/ethnic disparities on drug court outcomes.

1.3. Disparities in Post-Program Outcomes

Many scholars have also focused their examinations on other indicators of "success" in drug court, including recidivism. Research in this area generally finds that the drug court model yields positive impacts on post-program outcomes for those who participate (Lilley et al. 2019). In a meta-analysis of evaluations, scholars determined that drug courts significantly reduced the risk of recidivism for participants compared to similar offenders sentenced to "traditional" correctional options (Shaffer 2011; Wilson et al. 2006), sometimes by more than half during a 19-month follow-up period (Rempel et al. 2012). In another study, Krebs et al. (2007) compared recidivism rates between drug court participants and drug-involved probationers. They determined that, overall, drug court participants had a decreased likelihood of rearrest between 12 and 18 months following the program compared to those on probation (Krebs et al. 2007)⁴.

While drug courts have been found to reduce the likelihood of recidivism, many scholars have revealed that race and ethnicity may be associated with this outcome. Studies have revealed that non-White drug court participants are less likely to show reductions in recidivism compared to their White counterparts (Rossman et al. 2011; Saum and Hiller 2008). Further, in their study of Cincinnati drug court participants, Listwan et al. (2003) determined that race was significantly associated with post-program arrest and incarceration for a drug-related offense. Similarly, findings from Krebs et al. (2007) indicated that Hispanic/Latino participants had a higher likelihood of re-arrest following drug court than White participants. Yet, there are still several evaluations that have determined race was not

a primary influence on post-drug court outcomes (Cissner et al. 2013; Rossman et al. 2011; Shannon et al. 2018).

Similar to that of program completion, scholars have suggested that racial/ethnic disparities in the risk of recidivism could be intercorrelated with other factors. For instance, Krebs et al. (2007) determined that social support was related to post-program recidivism, where offenders with higher levels of support had a lower likelihood of rearrest. Differences in recidivism may also be rooted in disadvantages faced by minority communities when it comes to policing and supervision. Bowers (2008) suggests that police practices which target Black neighborhoods may increase the likelihood that Black offenders will be rearrested. These same police practices may also suggest that Black drug court participants are more likely to have a criminal history than White participants, leading to an increase in the amount of contact/monitoring (Bowers 2008) and the likelihood of post-program recidivism (Krebs et al. 2007).

1.4. Current Study

The role of participant race and ethnicity has occupied a central space in research within the context of drug treatment courts. There exists a sizeable amount of evidence that suggests White drug offenders have better success in drug courts than their non-White counterparts. In other words, drug courts might be more likely to replicate—if not exacerbate—existing racial/ethnic disparities in the criminal justice system⁵. However, there are still contradicting studies that indicate no evidence of racial/ethnic disparities or better outcomes for minority drug court participants. Further, there is little known about the critical early stages of the drug court process. Given the complexity of this process, which includes recruiting, screening, and admitting clients, it is at these early stages where opportunities for racial/ethnic disparities are likely to occur. For instance, some drug treatment court programs employ risk assessments as a way to determine eligibility (Belenko et al. 2011). Though race and ethnicity are not indicators within these instruments, some suggest that the risk factors that are sometimes included (e.g., employment history) are proxies for race and poverty (e.g., Silver and Miller 2002). Further, some scholars find Black offenders obtain higher Post-Conviction Risk Assessment (PCRA) scores than white offenders (Skeem and Lowenkamp 2016). This has potential deleterious effects in the drug court context if high PCRA scores exclude individuals from eligibility.

In the analyses that follow, three research questions were examined: (1) Do racial/ethnic disparities exist between those who are referred to the drug court and those who are admitted into the program? (2) Once admitted into the drug court, do racial/ethnic disparities exist in the likelihood of drug court graduation? (3) Following completion of the drug court, do racial/ethnic disparities exist in the likelihood of recidivism?

2. Data and Methodology

2.1. Case Overview: Milwaukee County Adult Drug Treatment Court (MCADTC)

The Milwaukee County Adult Drug Treatment Court (MCADTC) was implemented in Milwaukee, Wisconsin in 2009 to divert high risk and/or high need offenders with substance abuse issues from incarceration and provide treatment and services that would reduce substance-related issues and reduce criminal recidivism (Milwaukee County Drug Treatment Court 2016). MCADTC is a voluntary, deferred prosecution program that lasts between 12 to 18 months. To be eligible for the drug court, individuals must meet the following criteria: Milwaukee County resident, age 18 years or older, score between 24 to 40 on the Level of Service Inventory-Revised (LSI-R) risk assessment⁶, charged with a nonviolent felony or be a habitual nonviolent misdemeanor, face a recommendation by the District Attorney's Office of substantial incarceration, not charged with a manufacture or delivery drug offense, and does not have a history of sex- or weapons-related offenses (Milwaukee County Drug Treatment Court 2016).

Individuals admitted to MCADTC are required to participate in a highly structured and individualized treatment program that includes intensive supervision and oversight

from the drug court team, regular court appearances, treatment services, random drug testing, and sanctions and incentives. MCADTC is comprised of four phases: Phase 1 focuses on detoxing, abstinence, and enrollment in treatment; Phase 2 focuses on goal setting and continuation of treatment; Phase 3 focuses on development and internalization of recovery tools and skills and engagement in additional services (e.g., employment, education); and Phase 4 focuses on completing/graduating treatment, acquiring stable housing, and completion of all MCADTC requirements (Milwaukee County Drug Treatment Court 2016). As participants progress through the drug court, they are awarded incentives for complying with program rules (e.g., verbal praise, reduced court appearances, gift cards, etc.) and given sanctions for noncompliance (e.g., verbal admonishment, essay assignments, jail sanction, etc.). Participants who successfully complete the requirements of MCADTC graduate from the drug court and have their deferred charge(s) either reduced or dismissed. Individuals who do not successfully complete MCADTC requirements are revoked from the program and sentenced on their initial charge(s) (Milwaukee County Drug Treatment Court 2016).

2.2. Data Collection and Sources

Data for this study were obtained from several sources. The Milwaukee County District Attorney's Office and MCADTC program coordinator provided demographic and legal data for all individuals who were referred to MCADTC between 2016–2019. The researchers collected additional data related to participants' progress during the drug court through client treatment reports and direct observations of MCADTC staffing meetings⁷ and court appearances. Researchers also collected recidivism data from the court dockets in Wisconsin's Consolidated Court Automation Programs (CCAP)⁸.

The original data set contained complete information for all individuals who were referred to MCADTC between 2016 and 2019, yielding a sample size of 587 cases. This data set was used to analyze the first research question which examined the likelihood of admission to the drug court. The second (likelihood of graduation) and third (likelihood of recidivism) research questions examined only those individuals who were subsequently admitted to MCADTC. This resulted in an initial sampling frame of 268 cases. Only those individuals who either graduated or were revoked from the drug court were included in the final analysis; nine individuals had died while enrolled in MCADTC and 17 individuals remained active at the time of analysis. Thus, the final data set contained complete information for 242 participants; 118 participants graduated and 124 participants were revoked. This produced an overall graduation rate of 48.8%⁹.

2.3. Dependent Variables

Three dependent variables were used to examine each of the three research questions. To assess the first research question, the likelihood of admittance to MCADTC was coded as a dichotomous variable to represent those who were admitted to MCADTC (=1) and those who were referred but not admitted to MCADTC (=0). To examine the second research question for the likelihood of graduation, participants' program outcome was coded dichotomously, with graduation (=1) and revocation (=0). To assess the third research question, recidivism was examined through a dichotomous measure of new charges (0 = none, 1 = one or more). All criminal charges were included in this measure, despite the outcome. Therefore, charges that were dismissed but read in and those that were dismissed by the prosecutor were included. For both graduates and revoked participants, a recidivism window of 12 months was examined. Thus, for individuals who successfully graduated from the drug court, the follow-up period began on the date of their graduation from MCADTC. Individuals who were revoked from the drug court first served their imposed sanction; the follow-up period then began on the date their sentence was completed. This prevents error from being introduced into the analysis by having different follow-up lengths for the two groups.

2.4. Independent and Control Variables

The main variable of interest for this study was race and ethnicity. Dummy variables were created to measure race and ethnicity; non-Hispanic White was used as the reference category for non-Hispanic Black (=1) and Hispanic/Latino (=1).

A number of additional control variables were also included alongside race and ethnicity in the analysis. Prior literature has found a number of factors are correlated with drug court outcomes, many of which exert an independent effect on the outcome and/or an interactive effect with race and ethnicity (Evans et al. 2009; Dannerbeck et al. 2006; Gill 2016; Gray and Saum 2005; Shaffer et al. 2011). As such, the current study incorporated several control variables that were available within the dataset to examine their potential influence at each stage of the drug court process. Age at the time of referral to MCADTC was measured continuously in years. Gender was coded dichotomously as female = 0 and male = 1. An individual's risk level was examined using the Level of Service Inventory-Revised (LSI-R)¹⁰. A continuous measure for the total score received on the LSI-R was included in the current analysis. Prior criminal record was also measured using a continuous variable that counted the total number of prior charges. Further, a dichotomous variable was included to measure the severity of an individual's referral charge to MCADTC (misdemeanor = 0, felony = 1)¹¹.

As research has also found that certain programmatic factors have been correlated with drug court effectiveness (Brown et al. 2010; Gallagher and Nordberg 2013; Gill 2016; Hepburn and Harvey 2007; Marchand et al. 2006; McRee and Drapela 2012), several additional control variables were included to assess the second and third research questions. Four dichotomous variables were created to measure an individual's primary drug of choice; heroin was used as the reference category for cocaine (=1), alcohol (=1), and other (=1)¹². Two continuous measures were also created to examine the influence of overall violations received in the program, as well as the use of custody sanctions; these included the total number of violations that a participant received while participating in MCADTC, and the total number of custody sanctions received while participating in MCADTC.

2.5. Analytic Plan

The analysis is presented in a series of stages. First, descriptive statistics were examined for MCADTC participants at each of the three stages of the drug court process (admission, graduation, recidivism). Chi-square tests and independent sample *t*-tests were then conducted to determine if any differences existed between the groups at each stage of the process. Next, logistic regression analyses were employed to determine which factors were associated with the likelihood of admission, the likelihood of graduation, and the likelihood of recidivism. All independent variables were controlled for in each of the three models, with the exception of drug of choice, violations, and custody sanctions in the admittance model. Where race and ethnicity were found to be significant, further examination of the data was conducted to determine the possible underlying reason for the relationship. Thus, in the analysis of disparities at the admission stage, descriptive statistics were generated for the reasons for non-admission according to race and ethnicity. Similarly, in the analysis of disparities in program graduation, descriptive statistics were generated for the reasons for revocation.

3. Results

3.1. Likelihood of Admission

Descriptive statistics for all individuals who were referred to MCADTC from 2016 to 2019 are presented in Table 1 and are delineated by those who were admitted to the drug court and those who were referred but denied entry. Over half of all referrals to MCADTC were non-Hispanic White (59.7%), followed by almost one-third non-Hispanic Black (30.2%), and 10.1% Hispanic/Latino. A higher proportion of non-Hispanic White ($\chi^2 = 8.06$, $p = 0.005$) individuals were admitted to MCADTC compared to those not admitted; yet a higher proportion of non-Hispanic Black ($\chi^2 = 8.71$, $p = 0.003$) individu-

als were deemed ineligible compared to those who were admitted. The proportions of Hispanic/Latino referrals were nearly identical between the two groups.

Table 1. Descriptive Statistics for the Likelihood of Admission (N = 587).

	Not Admitted (N = 319) N (Mean) % (SD)	Admitted (N = 268) N (Mean) % (SD)	Significance Tests	Total (N = 587) N (Mean) % (SD)
Race/ethnicity				
Non-Hispanic White	153, 48.0	160, 59.7	$\chi^2 = 8.06^{**}$	313, 53.3
Non-Hispanic Black	134, 42.0	81, 30.2	$\chi^2 = 8.71^{**}$	215, 36.6
Hispanic/Latino	32, 10.0	27, 10.1	$\chi^2 = 0.01$	59, 10.1
Age	(33.7), (10.1)	(32.79), (9.3)	$t = 0.78$	(33.4), (9.7)
Gender				
Female	83, 26.0	74, 27.6	$\chi^2 = 0.19$	157, 26.7
Male	236, 74.0	194, 72.4		430, 73.3
LSI-R	(28.2), (5.3)	(30.06), (4.3)	$t = -4.48^{***}$	(29.1), (4.9)
Prior charges	(5.2), (6.1)	(3.28), (4.0)	$t = 4.74^{***}$	(4.3), (5.3)
Referral charge severity				
Misdemeanor	49, 15.4	24, 9.0	$\chi^2 = 5.49^*$	73, 12.4
Felony	270, 84.6	244, 91.0		514, 87.6

* $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$. Note: LSI-R is used as an abbreviation for the Level of Service Inventory–Revised.

Descriptive statistics also revealed a higher percentage of individuals who identified as male and were an average age of about 33 years old. Further, significance tests determined that individuals who were admitted to MCADTC had a higher LSI-R score ($t = -4.48$, $p = 0.000$), fewer prior charges ($t = 4.74$, $p = 0.000$), and a current felony charge ($\chi^2 = 5.49$, $p = 0.023$) compared to those who were not admitted to the program.

Results of the logistic regression analysis that examined the likelihood of admittance to MCADTC are presented in Table 2. Findings indicated that race and ethnicity, LSI-R score, and prior charges were significantly influential at this stage of the drug court process. Specifically, non-Hispanic Black individuals were 44% less likely than non-Hispanic White individuals ($b = -0.58$, $p = 0.003$) to be admitted into MCADTC; there were no significant differences found between Hispanic/Latino and non-Hispanic White individuals. Further, individuals who received a higher LSI-R score (indicating a higher risk-level) ($b = 0.09$, $p = 0.000$) and had fewer prior charges ($b = -0.11$, $p = 0.045$) were significantly more likely to be admitted to the drug court than their counterparts.

Table 2. Logistic Regression Results for the Likelihood of Admission (N = 587).

	b	SE	Odds
Race/ethnicity			
Non-Hispanic Black	-0.58 **	0.20	0.56
Hispanic/Latino	-0.34	0.30	0.71
Age	0.02	0.01	1.02
Gender	0.21	0.21	1.23
LSI-R	0.09 ***	0.02	1.10
Prior charges	-0.11 ***	0.02	0.90
Referral charge severity	0.57 *	0.28	1.76
Constant	-3.45 ***	0.71	0.03

* $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$. Note: LSI-R is used as an abbreviation for the Level of Service Inventory–Revised.

Given the significant finding between race/ethnicity and admittance to MCADTC, further examination was conducted to determine the reason why individuals were denied admission¹³ into the program (Table 3). Statistics revealed, overall, that a higher proportion of non-Hispanic White (45.1%), non-Hispanic Black (29.1%), and Hispanic/Latino (28.1%)

individuals were not admitted to MCADTC because of general exclusionary criteria such as not being a Milwaukee County resident, having an open criminal charge in another jurisdiction, or having an LSI-R score that was outside the required risk-level. The second highest reason for non-admission across the various racial/ethnic groups indicated that non-Hispanic Whites (26.1%) alternatively accepted another intervention (e.g., probation, DPA), non-Hispanic Blacks (23.9%) were ineligible due to a weapons-related referral charge and/or criminal history, and Hispanic/Latinos (21.9%) were ineligible due to a violent referral charge and/or criminal history.

Table 3. Reasons for Non-Admission (N = 319).

	Non-Hispanic White (N = 153)	Non-Hispanic Black (N = 134)	Hispanic/Latino (N = 32)	Total (N = 319)
Exclusion–violent offense or criminal history	14 (9.2%)	29 (21.6%)	7 (21.9%)	50 (15.7%)
Exclusion–weapons offense or history	11 (7.2%)	32 (23.9%)	5 (15.6%)	48 (15.0%)
Exclusion–other eligibility requirements	69 (45.1%)	39 (29.1%)	9 (28.1%)	117 (36.7%)
Accepted probation or DPA	40 (26.1%)	22 (16.4%)	6 (18.8%)	68 (21.3%)
Client-related issues	19 (12.4%)	12 (9.0%)	5 (15.6%)	36 (11.3%)

3.2. Likelihood of Graduation

Descriptive statistics, grouped by individuals who either graduated or were revoked from MCADTC, are presented in Table 4. The statistics indicated a higher proportion of non-Hispanic White participants who graduated from the drug court than who were revoked (62.7% vs. 54.8% respectively); yet there was a slightly higher proportion of non-Hispanic Black participants who were revoked than participants who successfully graduated (35.5% vs. 27.1% respectively). Hispanic/Latino participants who had graduated or were revoked were relatively even (9.7% vs. 10.2%, respectively). Chi-square analyses determined no significant differences between program outcome and any of the racial/ethnic categories.

Table 4. Descriptive Statistics for Likelihood of Graduation (N = 242).

	Revoked (N = 124) N (Mean) % (SD)	Graduated (N = 118) N (Mean) % (SD)	Significance Tests	Total (N = 242) N (Mean) % (SD)
Race/ethnicity				
Non-Hispanic White	68, 54.8	74, 62.7	$\chi^2 = 1.55$	142, 58.7
Non-Hispanic Black	44, 35.5	32, 27.1	$\chi^2 = 1.96$	76, 31.4
Hispanic/Latino	12, 9.7	12, 10.2	$\chi^2 = 0.02$	24, 9.9
Age	(31.6), (9.7)	(34.9), (9.0)	$t = -2.77^{**}$	(33.2), (9.5)
Gender				
Female	37, 29.8	29, 24.6	$\chi^2 = 0.84$	66, 27.3
Male	87, 70.2	89, 75.4		176, 72.7
LSI-R	(30.7), (4.4)	(29.4), (4.1)	$t = 2.42^*$	(30.1), (4.3)
Prior charges	(3.7), (4.7)	(2.6), (3.2)	$t = 2.15^*$	(3.2), (4.0)
Referral charge severity				
Misdemeanor	15, 12.1	8, 6.8	$\chi^2 = 1.99$	23, 9.5
Felony	109, 87.9	110, 93.2		219, 90.5
Drug of choice				
Heroin	72, 58.1	79, 66.9	$\chi^2 = 2.03$	151, 62.4
Cocaine	26, 21.0	22, 18.6	$\chi^2 = .21$	48, 19.8
Alcohol	12, 9.7	6, 5.1	$\chi^2 = 1.85$	18, 7.4
Other	14, 11.3	11, 9.3	$\chi^2 = .25$	25, 10.3
Total violations	(15.4), (13.3)	(11.5), (10.5)	$t = 2.51^*$	(13.5), (12.1)
Total custody sanctions	(2.6), (1.9)	(1.2), (1.3)	$t = 6.93^{***}$	(1.9), (1.8)

* $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$. Note: LSI-R is used as an abbreviation for the Level of Service Inventory–Revised.

Additional descriptive statistics revealed a higher percentage of MCADTC graduates who were male, had a felony referral charge, and reported heroin as their drug of choice. Tests of significance further indicated that participants who successfully graduated from the drug court were older ($t = -2.77, p = 0.006$), had a lower LSI-R score ($t = 2.42, p = 0.016$), fewer prior charges ($t = 2.15, p = 0.032$), received fewer program violations ($t = 2.51, p = 0.013$), and fewer custody sanctions ($t = 6.93, p = 0.000$).

The second model examined the likelihood of graduation from MCADTC; and results of the logistic regression analysis are presented in Table 5. At this stage, results indicated that race and ethnicity, age, prior charges, and custody sanctions were all significantly associated with graduating the drug court. Non-Hispanic Black participants were 61% less likely than non-Hispanic White participants to graduate the drug court ($b = -0.94, p = 0.023$); yet, Hispanic/Latino participants were just as likely as non-Hispanic White participants to graduate. Further, participants who were older ($b = 0.09, p = 0.000$) and had fewer prior charges ($b = -0.14, p = 0.004$) were significantly more likely to graduate. While the total number of violations was not found to be significant, analysis did determine that the number of custody sanctions received during the drug court was significantly associated with program outcomes. Particularly, for every custody sanction received in MCADTC the likelihood of graduating the program decreased by 48% ($b = -0.65, p = 0.000$).

Table 5. Logistic Regression Results for Likelihood of Graduation ($N = 242$).

	B	SE	Odds
Race/ethnicity			
Non-Hispanic Black	-0.94 *	0.42	0.39
Hispanic/Latino	-0.74	0.52	0.48
Age	0.09 ***	0.02	1.09
Gender	0.39	0.36	1.48
LSI-R	-0.01	0.04	0.99
Prior charges	-0.14 **	0.05	0.87
Referral charge severity	0.40	0.55	1.48
Drug of choice			
Cocaine	-0.51	0.44	0.60
Alcohol	-1.07	0.68	0.34
Other	-0.04	0.55	0.96
Total violations	0.02	0.02	1.02
Total custody sanctions	-0.65 ***	0.13	0.52
Constant	-1.32	1.41	0.27

* $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$. Note: LSI-R is used as an abbreviation for the Level of Service Inventory-Revised.

Considering the significant association between race and ethnicity and program outcome, further descriptive statistics were generated to examine the reason in which participants were revoked from MCADTC (Table 6). Statistics indicated that slightly over half (52.9%) of all revocations for non-Hispanic White participants was due to continued noncompliant behavior in the program (e.g., positive drug tests, missed drug tests, missed treatment sessions or contacts with case manager, etc.). For both non-Hispanic Black (43.2%) and Hispanic/Latino (50.0%) participants the most frequent reason for revocation was receiving a new criminal charge while still enrolled in the drug court.

Table 6. Reasons for Revocation (N = 124).

	Non-Hispanic White (N = 68)	Non-Hispanic Black (N = 44)	Hispanic/Latino (N = 12)	Total (N = 124)
Noncompliant behavior	36 (52.9%)	11 (25.0%)	3 (25.0%)	50 (40.3%)
Bench warrants	15 (22.1%)	11 (25.0%)	3 (25.0%)	29 (23.4%)
New criminal charges	9 (13.2%)	19 (43.2%)	6 (50.0%)	34 (27.4%)
Out of time	8 (11.8%)	3 (6.8%)	0 (0%)	11 (8.9%)

3.3. Likelihood of Recidivism

Table 7 presents the descriptive statistics for recidivism and are delineated by participants who received no new criminal charges (i.e., did not recidivate) and participants who received one or more new charges (i.e., recidivated) following involvement in MCADTC. There was a slightly larger proportion of non-Hispanic White (59.3% vs. 58.5% respectively) and Hispanic/Latino (13.0% vs. 9.0%, respectively) individuals who recidivated within 12 months following drug court participation. However, non-Hispanic Black individuals had a marginally higher proportion who did *not* recidivate following participation in MCADTC (32.4% vs. 27.8% respectively).

Table 7. Descriptive Statistics for Likelihood of Recidivism (N = 242).

	No New Charges (N = 188) N (Mean) %(SD)	One or More New Charges (N = 54) N (Mean) %(SD)	Significance Tests	Total (N = 242) N (Mean) %(SD)
Race/ethnicity				
Non-Hispanic White	110, 58.5	32, 59.3	$\chi^2 = 0.01$	142, 58.7
Non-Hispanic Black	61, 32.4	15, 27.8	$\chi^2 = 0.43$	76, 31.4
Hispanic/Latino	17, 9.0	7, 13.0	$\chi^2 = 0.72$	24, 9.9
Age	(33.7), (9.6)	(31.7), (9.1)	$t = 1.38$	(33.2), (9.5)
Gender				
Female	54, 28.7	12, 22.2	$\chi^2 = 0.89$	66, 27.3
Male	134, 71.3	42, 77.8		176, 72.7
LSI-R	(30.2), (4.2)	(29.5), (4.5)	$t = 1.21$	(30.1), (4.3)
Prior charges	(3.0), (3.8)	(3.7), (4.7)	$t = -1.10$	(3.2), (4.0)
Referral charge severity				
Misdemeanor	15, 8.0	8, 14.8	$\chi^2 = 2.28$	23, 9.5
Felony	173, 92.0	46, 85.2		219, 90.5
Drug of choice				
Heroin	115, 61.2	36, 66.7	$\chi^2 = 0.54$	151, 62.4
Cocaine	40, 21.3	8, 14.8	$\chi^2 = 1.10$	48, 19.8
Alcohol	16, 8.5	2, 3.7	$\chi^2 = 1.41$	18, 7.4
Other	17, 9.0	8, 14.8	$\chi^2 = 1.51$	25, 10.3
Total violations	(13.5), (12.7)	(13.5), (9.9)	$t = 0.03$	(13.5), (12.1)
Total custody sanctions	(1.8), (1.7)	(2.2), (1.9)	$t = -1.49$	(1.9), (1.8)
Program Outcome				
Revoked	87, 46.3	37, 68.5	$\chi^2 = 8.31$ **	124, 51.2
Graduated	101, 53.7	17, 31.5		118, 48.8

** $p < 0.01$. Note: LSI-R is used as an abbreviation for the Level of Service Inventory-Revised.

Tests of significance found no differences between the independent variables and recidivism, with the exception of program outcome. Here, individuals who had been revoked from MCADTC were more likely to have received a new criminal charge ($\chi^2 = 8.31$, $p = 0.005$) within 12 months post-program compared to those who had successfully graduated MCADTC.

The final model examined the likelihood of recidivism following participation in MCADTC. Results of the logistic regression analysis are presented in Table 8. For this analysis, an additional control variable was included to indicate whether an individual had graduated (=1) or was revoked (=0) from MCADTC. Findings determined there were no significant differences between race and ethnicity and the risk of receiving a new criminal charge. Instead, results indicated that MCADTC program outcome was the only variable associated with the likelihood of recidivism. Specifically, individuals who had successfully graduated the drug court were 60% less likely to receive a new charge ($b = -0.92, p = 0.010$) within 12 months compared to those who had been revoked from MCADTC.

Table 8. Logistic Regression Results for Likelihood of Recidivism ($N = 242$).

	b	SE	Odds
Race/ethnicity			
Non-Hispanic Black	−0.34	0.47	0.71
Hispanic/Latino	0.46	0.53	1.58
Age	−0.02	0.02	0.98
Gender	0.42	0.40	1.52
LSI-R	−0.07	0.04	0.93
Prior charges	0.10	0.05	1.10
Referral charge severity	−0.90	0.54	0.41
Drug of choice			
Cocaine	−0.47	0.51	0.62
Alcohol	−1.50	0.92	0.22
Other	0.67	0.55	1.95
Total violations	−0.01	0.02	0.99
Total custody sanctions	0.09	0.12	1.09
Program outcome	−0.92 *	0.39	0.40
Constant	2.11	1.56	8.24

* $p < 0.05$. Note: LSI-R is used as an abbreviation for the Level of Service Inventory–Revised.

4. Discussion

The current study examined the influence of race and ethnicity at three stages of the drug court process including referral-to-admittance, the likelihood of graduation, and the likelihood of recidivism. Analyses found racial/ethnic disparities—specifically between non-Hispanic Black and White individuals—in the likelihood of admission and the likelihood of graduation from MCADTC, but not in the likelihood of recidivism following participation in the drug court.

At the earliest stage, program admittance, non-Hispanic Black individuals were 44% less likely than non-Hispanic White individuals to be admitted to MCADTC, yet Hispanic/Latino individuals were just as likely to be admitted to the drug court as non-Hispanic White individuals. To better understand why these findings occurred at this stage of the process, descriptive statistics for all significant variables (LSI-R and prior charges) were examined by race/ethnicity, as well as the reasons why individuals were deemed ineligible for the drug court. Between Hispanic/Latino and non-Hispanic White individuals, the average risk score (29.2 vs. 29.1 respectively) and average prior criminal record (3.5 vs. 3.8 respectively) were almost identical, which may explain the lack of significant differences between these two groups. Examining non-Hispanic Black and White individuals, there was a similar risk score between the two groups (29.0 vs. 29.1, respectively); yet, non-Hispanic Black individuals had a more extensive prior record (5.1 prior charges) compared to non-Hispanic White individuals (3.8 prior charges) in the current sample. Further, the primary reason for ineligibility among non-Hispanic Black individuals was the presence of weapons or drug trafficking in the referral charge or within one’s criminal history. Therefore, it is likely that prior criminal record or the nature of the current referral charge automatically registered non-Hispanic Black individuals as ineligible or as an increased threat to community safety, thus excluding them from the drug court. In contrast, non-Hispanic White individuals were more likely denied

entry into the drug court because of general exclusion criteria (e.g., LSI-R score below the cut off of 24, open criminal case in another county) or they accepted another criminal justice intervention (e.g., probation or deferred prosecution agreement). This analysis suggests that exclusionary criteria may be limiting the reach of the program and points to one area where program design could be modified to reduce the disproportionate impact of certain eligibility restrictions and requirements. Indeed, “removing subjective eligibility restrictions and applying evidence-based selection criteria significantly increases the effectiveness and cost-effectiveness of Drug Courts by allowing them to serve the most appropriate target population” (National Association of Drug Court Professionals 2018a).

Racial/ethnic disparities were also found in the likelihood of graduation from MCADTC. Specifically, non-Hispanic Black participants were 61% less likely to graduate the drug court compared to non-Hispanic White participants. These findings support prior studies that have concluded that African American individuals are less likely to successfully complete a drug court program compared to White individuals (Brewster 2001; Dannerbeck et al. 2006; Gray and Saum 2005; Howard 2016). In contrast, Hispanic/Latino participants were just as likely to graduate MCADTC as non-Hispanic White participants. To better understand why these disparities occurred, descriptive statistics for all variables that were found to be significant (age, prior charges, custody sanctions) in this analysis were further examined. The statistics indicated that non-Hispanic White and Hispanic/Latino participants were of similar age (31.4 vs. 31.5 years, respectively), had comparable prior criminal records (2.6 vs. 1.3, respectively), and received a similar amount of custody sanctions (3.1 vs. 2.3, respectively) during the program; thus, offering some explanation for why there were no significant differences between these two groups. On the other hand, non-Hispanic Black participants were older (37.2 vs. 31.4, respectively) and had fewer custody sanctions (2.0 vs. 3.1, respectively) than non-Hispanic White participants. In theory, this should result in a higher likelihood of graduation, yet this analysis found that non-Hispanic Black participants were significantly less likely to graduate. Upon further investigation, it was determined that non-Hispanic Black participants had a more extensive prior record (4.8 vs. 2.6 charges, respectively) than non-Hispanic White individuals. Non-Hispanic Black participants were also more likely to be revoked due to receiving new criminal charges while enrolled in the drug court. The connection between receiving a new criminal charge during the program and a more extensive criminal history appears to be what is driving these disparities. One possible explanation for this pattern is that the relationship between criminal history and subsequent charges could be an indication and a consequence of broader disparities in policing and supervision. Bowers (2008) suggests that police practices which target Black neighborhoods may increase the likelihood that Black offenders will be rearrested. These same police practices may also mean that Black participants are more likely to have a criminal history than White participants, which may lead to an increase in the amount of contact and monitoring (Bowers 2008), ultimately increasing the likelihood of detecting illegal activity and program revocation (Krebs et al. 2007). Though the current data does not afford the opportunity to test if this underlying mechanism is present, it could suggest that the disparities present in other aspects of the criminal justice system are not only present in special treatment courts but are potentially exacerbating them as well.

Finally, despite finding racial/ethnic disparities in the likelihood of admission and graduation from MCADTC, the current study did not find the same patterns when it came to the likelihood of recidivism during the follow-up window. Instead, the only significant factor to influence recidivism was whether an individual had graduated or been revoked from MCADTC. While some scholars have determined disparities at this point in the drug court process, the current study did not find that race and ethnicity exert an independent, statistically significant effect on the likelihood of post-program recidivism. This finding points to the utility of these programs when it comes to reducing criminal recidivism and improving community safety.

4.1. Policy Implications

In addition to its contributions to the scholarly literature on racial and ethnic disparities in the context of drug treatment courts, the findings from this analysis also have a number of practical implications that can be adopted by practitioners in their efforts to reduce unwarranted racial and ethnic disparities in the context of drug treatment courts. First, recall that the results indicate that racial/ethnic disparities existed at the early stages of the drug court process, particularly between non-Hispanic Black and White individuals. At the time of this paper, the MCADTC has made several changes to their policies and procedures to address these disparities. For example, when reviewing cases that are referred to the drug court, the MCADTC team examines both violent-related and weapons-related referrals on a closer case-by-case basis to determine whether they would be suitable for the drug court program, rather than automatically deeming these cases ineligible (which, until recently, would have been the result of having such a charge on record).

Change has also occurred as a result of finding that racial/ethnic disparities existed in the likelihood of program completion in the MCADTC. Similar to the actions taken at the admissions stage, the MCADTC team is taking corrective action to address disparities in graduation. These actions include increased focus on utilizing culturally competent treatment programs and additional community resources for participants. In light of racially stratified graduation rates, the court has also re-examined its use of custody sanctions, encouraging the use of alternative and creative sanctions as a response to noncompliance while reserving the use of custody sanctions in instances where high-level and/or repeated violations occur.

The MCADTC case is an example of how scholarly research can be used by the courts to inform efforts to reduce unwarranted disparities and better serve their target populations. The long-term results of these changes have yet to be uncovered, but this case also highlights the importance for continued efforts by scholars and practitioners alike to uncover and address racial and ethnic disparities at various stages of the drug treatment court process.

4.2. Limitations and Future Directions

There are a few limitations to note within the current study. First, this study was limited to one county in Wisconsin. While MCADTC adheres to the key components of the drug court model put forth by the [National Association of Drug Court Professionals \(2018a, 2018b\)](#), there may still be differences in program characteristics (e.g., program policies and procedures, community resources, state and national policies, etc.) and target populations. Next, the current study was able to provide an analysis that compared three separate racial/ethnic groups on drug court outcomes. While the sample size for Hispanic/Latino participants was roughly 10% in each of the three stages, it is possible that the smaller sample size could lead to reduced statistical power, thus, decreasing the likelihood that a true effect was detected. Further, because this sample includes only those cases referred to the drug court, the analysis may be limited in scope, as biases may exist in earlier decision-points (e.g., charging decisions, police encounters) that could affect who is processed into the courts, and who is subsequently referred to the drug court.

The current study was able to examine several control variables that have been deemed relevant in drug court research, however, there are certainly additional variables that may influence drug court outcomes. Including additional variables such as mental health, employment, education, socioeconomic status, or social support that have been found to intercorrelate with race/ethnicity could provide a more comprehensive understanding of why disparities may occur at certain stages of the drug court process (For examples, see [Brewster 2001](#); [Butzin et al. 2002](#); [Dannerbeck et al. 2006](#); [Hartley and Phillips 2001](#); [Krebs et al. 2007](#); [Schiff and Terry 1997](#)). Further, including neighborhood factors or macro-level disparities in social allocation of resources could prove advantageous in understanding the source of disparities in drug court (e.g., [Knox and Mummolo 2020](#)).

Leveraging individual-level data, the current study was able to offer a multifaceted quantitative analysis that examined racial/ethnic disparities at several stages of the drug court process. However, it remains critical for additional jurisdictions to conduct similar analyses to determine whether unfair disparities may exist in their program for racial or ethnic minority participants; and allow for the opportunity to take reasonable corrective measures to eliminate those disparities and ensure equity and inclusion for all individuals (National Association of Drug Court Professionals 2010). Future research should also strive to incorporate qualitative analyses to further understand why disparities may exist at various stages of the drug court process. Some qualitative studies have suggested that lower graduation rates for minority participants may be due to issues with culturally incompetent treatment services, inability to address mental health needs, and issues when it comes to gaining employment (Gallagher and Nordberg 2013). Incorporating both quantitative and qualitative methods can help address the black box of racial/ethnic disparities at each stage of the drug court process.

4.3. Conclusions

The National Association of Drug Court Professionals (2010) has directed drug courts across the U.S. to examine whether unfair disparities exist in their program for racial or ethnic minority participants. While the body of research on drug courts has continued to grow in response, the findings within this literature are often mixed and tend to focus on latter stages of the drug court process (graduation and recidivism) rather than earlier stages (referral to admission). The present study adds to the literature by examining the relationship between race and ethnicity at several stages of the drug court process.

As this study—and others—demonstrate, the drug court model is generally successful in its goals to disrupt the cycle of relapse and crime (see also Logan and Link 2019; Marlowe et al. 2016; Shaffer 2011). The caveat is that not all populations are equally represented or equally well-served in these contexts. The results of our analysis indicate the presence of racial/ethnic disparities, particularly between non-Hispanic Black and White individuals, in both admission-to and graduation-from MCADTC. At the admissions stage, non-white referrals were disproportionately impacted by exclusionary criteria: the presence of weapons or drug trafficking in the referral charge or within one's criminal history automatically registered individuals as ineligible or as an increased threat to community safety, thus excluding them from the drug court. At the graduation stage, racial disparities appear to be driven by a connection between a more extensive criminal history and receiving new criminal charges while enrolled in the program. Taken together, these findings suggest that patterns of racial and ethnic disparity found in other areas of the criminal justice system are reflected—and even exacerbated—in this context as well.

In addition to its contributions to the scholarly literature on unwarranted racial and ethnic disparities in the context of drug treatment courts, this study demonstrates that the findings can also have practical implications. Corrective actions have begun to occur within the Milwaukee County context to address racial and ethnic disparities in the drug treatment court, and highlight the importance of continued efforts to identify, understand, and address unwarranted disparities in other jurisdictions in order to improve equity and inclusion. Ultimately, empirical examinations of special treatment courts are critical in the understanding of inequalities in the criminal justice system, as well as in the creation of solutions that begin to address these issues.

Author Contributions: All authors contributed equally to the manuscript. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Subject consent was waived, as the information collected involved secondary data or was shared in open court.

Conflicts of Interest: The authors declare no conflict of interest.

Notes

- ¹ Recidivism is often defined as, “falling back or relapse into prior criminal habits, especially after receiving a sanction or punishment” (Sawyer and Wagner 2019; Solomon et al. 2008).
- ² The implementation of California’s Proposition 36 occurred in July 2001. The proposition mandated that individuals with fewer than three previous drug convictions and no violent convictions be offered drug treatment instead of incarceration (Nicosia et al. 2013).
- ³ While Dannerbeck et al. (2006) find African Americans’ lower level of success in treatment court to the increased use of cocaine as the drug of choice, DeVall and Lanier (2012) find methamphetamine as the drug of choice is influential in program completion success.
- ⁴ It should be noted the authors did not find significance between the two groups (drug court and probation) prior to 12 months; and the differences were no longer significant after 18 months (Krebs et al. 2007).
- ⁵ Indeed, individuals who fail to complete the program often end up in jail, sometimes with longer terms of confinement than traditional adjudication (Gottfredson et al. 2003; Nolan 2001; Rempel et al. 2012).
- ⁶ The LSI-R suggests the following risk-levels based on the total score that an individual receives: low-risk (0–23), medium/moderate-risk (24–33), high-risk (34–40) (Andrews and Bonta 1995).
- ⁷ During the court staffing meetings, the drug court team (i.e., presiding judge, court coordinator, attorneys, and case managers) discuss each participant’s progress in the program, including prosocial and noncompliant behaviors, since the previous court hearing. Participants are not present during these meetings, but instead meet with the presiding judge during the regular court appearances where they discuss the participant’s progress in the drug court.
- ⁸ The Wisconsin Circuit Court Access is a website that provides public access to the records of Wisconsin circuit courts for counties using the Consolidated Court Automation Programs (CCAP) Case Management system (Wisconsin Court System 2012).
- ⁹ A power analysis was initially employed to determine the number of participants needed in this study to conduct multivariate analyses. Results of the power analysis (to achieve power of 0.80, with an alpha of 0.05) indicated a minimum sample size of 194 participants required to detect a significant model. There were no outliers or missing data; therefore, the sample size was determined to be adequate to identify medium and large statistical effects (see Cohen 1988).
- ¹⁰ In Wisconsin, officials frequently employ the Level of Service Inventory–Revised (LSI-R), which is a quantitative assessment tool that incorporates various offender attributes on criminal history, education and employment, financial, family and marital status, accommodation, leisure and recreation, companions, alcohol and substance issues, emotional and personal health, and various attitudes (Andrews and Bonta 1995). The LSI-R aids in predicting the risk of recidivism, as well as providing appropriate services and programming for individuals (Mellow et al. 2008). The LSI-R suggests the following risk-levels based on the total score that an individual receives: low-risk (0–23), medium/moderate-risk (24–33), high-risk (34–40) (Andrews and Bonta 1995).
- ¹¹ If an individual received more than one charge in the referral, the most serious charge was used in the analysis.
- ¹² Other included substances like THC, methamphetamine, etc.
- ¹³ In MCADTC, individuals could be excluded for any of the following reasons: violent referral charge or criminal history, weapons-related referral charge or criminal history, did not meet other eligibility requirements (e.g., LSI-R score too low or too high, not a Milwaukee County resident, had an open criminal case in another county at the time of referral, etc.), client opted for another intervention (e.g., probation, deferred prosecution agreement), or other client-related issues (e.g., client not interested, bench warrant status, referred to a mental health court).

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