Racial Differences in Juvenile Recidivism Rates for Youth with Low Dynamic Risk: A Test of the Risk-Need-Responsivity Model Using Propensity Score Matching

by

Bellamy Williams

A Thesis Presented in Partial Fulfillment
of the Requirements for the Degree
Master of Science

Approved April 2026 by the
Graduate Supervisory Committee:

Adam Fine, Chair
Marva Goodson
Kaelyn Sanders

ARIZONA STATE UNIVERSITY

May 2026

ABSTRACT

The Risk-Need-Responsivity (RNR) model is a dominant framework for rehabilitation in the legal system that links intervention intensity to assessed risk, such that higher-risk individuals are expected to require more resources to desist from offending while lower-risk individuals require fewer. This approach to rehabilitation is reinforced by the view that crime can be explained by individual traits and behaviors that are amenable to intervention, with the RNR framework centering these traits as the primary drivers of offending and linking higher assessed risk to more intensive services. . This emphasis can obscure structural conditions that shape justice system outcomes, including differential surveillance, variation in supervision responses, and racialized patterns of policing. To test the RNR assumption that low-risk youth with similar criminogenic profiles should have similar outcomes, the present study uses multivariate regression and an Augmented Inverse Probability Weighting propensity score sensitivity analysis on administrative data from the Florida Department of Juvenile Justice Community Positive Achievement Change Tool (C-PACT). The analysis focuses on Black and White youth classified as low-risk at baseline. It examines subsequent legal system contact, measured as a composite of rearrest, readjudication, or placement within 365 days of the last recorded event. Using a trimmed analytic sample of 1,934 justice-involved youth balanced on observed criminogenic, legal, family, and neighborhood characteristics, the study assesses whether racial disparities persist among youth with comparable measured risk profiles. The findings indicate that low-risk Black youth remain substantially more likely than White youth with the same risk designation to experience subsequent juvenile justice system involvement. This challenges the RNR framework's assumption that comparable

criminogenic risk should yield comparable outcomes. Rather than locating these outcomes solely in individual traits, the findings suggest that racial disparities may be produced by barriers to desistance not captured by risk assessment, including differential surveillance, more punitive supervision responses, and unequal access to resources and opportunities that support successful reentry.

TABLE OF CONTENTS

Page

LIST OF TABLES

Tables Page

LIST OF FIGURES

Figures Page

INTRODUCTION

The RNR framework determines intervention need in terms of risk level (Chua et al., 2014). This is meant to inform legal system practitioners about where an individual needs the most attention in order to lower their risk of re-offending. Within this framework, those who have higher risk scores need more support than those who score lower (Andrews & Bonta, 2017). The logic behind this is that the lower risk group of individuals should have lower baseline likelihood of recidivism and therefore should not require intense supervision or intervention. This assumption shapes how success and failure are measured in the system itself, since recidivism is often treated as the central indicator of whether rehabilitation efforts "work." In this study, however, the outcome is conceptualized as subsequent juvenile justice system involvement, including rearrest, readjudication, and placement. This framing reflects that renewed system contact is shaped not only by youth behavior, but also by surveillance, discretionary decision-making, and institutional response. Consequently, a large body of juvenile justice research has focused on identifying the factors that contribute to delinquency and recidivism among youth. Juvenile justice scholars spend significant amounts of time trying to address the known and tangible causes of delinquency in youth. Some of those causes include substance use, peer delinquency, family dynamics (Gearhart & Tucker, 2020), or maturational factors related to a child's developmental stage (Steinberg et al., 2008, Icenogle et al., 2019). However, these explanations focus primarily on individual-level traits and developmental processes. Less attention has been given to structural conditions that shape youth outcomes within the justice system, including differential surveillance, variation in system responses, and racialized patterns of policing. This study

builds on this gap by examining whether measures of dynamic risk are sufficient to explain subsequent system involvement among youth. In doing so, it evaluates the extent to which commonly used risk assessment frameworks account for observed outcomes. The following literature review first outlines the Risk-Need-Responsivity framework and its emphasis on individual risk factors, then examines research on racial overrepresentation in the juvenile justice system and finally considers theoretical perspectives on antiblackness that frame how these disparities are produced and maintained.

LITERATURE REVIEW

Risk Assessments

Risk assessments have historically focused on reducing recidivism. Before dynamic risk assessments, or what Bonta and Andrews (2007) describe as the third generation of risk assessment instruments, various legal system actors such as probation officers and mental health practitioners were given the discretion to determine risk. That practice was eventually replaced with actuarial risk assessments that were more systematized and used items that while they were shown to contribute to recidivism were also static in nature (Hart & Cooke, 2013). In other words, these assessments were based characteristics about a person that cannot be changed such as prior criminal history or age at first offense. It was not until the 1980s that risk instruments began to include dynamic risk factors that could be addressed with interventions (Bonta & Andrews, 2007). Following the RNR model, correctional staff were able to use dynamic risk scores and

apply targeted programming meant to reduce risk in specific areas and subsequently lower the chances of re-offending (Andrews et al, 1990).

The prescreen component of the C-PACT measures dynamic risk characteristics across six domains: school, peer relationships, family, substance use, attitudes, and aggression. These domains are operationalized through a series of items capturing both behavioral patterns and social context, such as school attendance and performance, the presence of antisocial peers, parental functioning, and beliefs about aggression and responsibility. Importantly, the C-PACT emphasizes dynamic risk factors that can change over time and be responsive to intervention. Empirical analyses suggest that these measures coalesce into a single underlying construct of "total dynamic risk," which is used to classify youth and inform supervision and treatment decisions (Wolff, 2020). Although anti-Blackness is often theorized as an ontological condition, it may be examined quantitatively through patterns of differential surveillance, formal processing, and rearrest that persist after accounting for self-reported offending and other observed factors (Padgaonkar et al. 2021). As a result, the use of instruments like the C-PACT necessitates careful interpretation, particularly when examining racial disparities, as observed differences in risk scores may reflect differential exposure to institutional processes rather than inherent differences in youth behavior. Despite their widespread use in assessing and managing risk, these tools operate within a broader system in which racial disparities in outcomes remain pronounced.

Overrepresentation

Black youth are overrepresented at every point of the juvenile justice system (Abrams et al., 2021; National Council on Crime and Delinquency, 2007; Rovner, 2016).

Scholarship on disproportionate minority contact has long attempted to explain this pattern. In a review of disproportionate minority system contact, Alex Piquero explored several hypotheses that have been tested in attempts to demystify this phenomenon: the differential involvement hypothesis, the differential selection and processing hypothesis, and a third hypothesis that suggests both differential involvement and differential selection and processing simultaneous create racial overrepresentation (2008).

Succinctly, the differential involvement hypothesis posits that minorities; commit crimes more often, that the types of crimes minorities commit are characteristically more likely to be processed in the criminal legal system, and lastly, that they commit those crimes for longer periods of time than white youth. The second hypothesis related to differential selection and processing implies that minorities are disproportionately monitored by police and processed through courts and correctional systems in discriminatory ways, which leads to higher levels of system involvement. The third hypothesis proposes that differential involvement, selection, and processing all interplay to create minority overrepresentation in the criminal justice system.

More recent research has moved beyond treating differential offending and processing as fully separate explanations. Instead, newer work increasingly examines how racial disparities are produced through broader punitive policies, institutional discretion, and unequal exposure to formal social control. For example, Montes et al. (2020) situate racial disparity within the broader punitive turn, emphasizing that minority overrepresentation is shaped not only by individual behavior but also by policy design, discretionary decision making, and the differential consequences of punishment across

racial groups. This more recent literature shifts attention from whether disparities arise from offending or processing alone to how justice-system arrangements themselves reproduce unequal outcomes.

Regardless of what the actual cause is, there remains the question of why this occurs. If Black youth are differentially offending, why is that? Similarly, if Black youth are being processed and surveilled in discriminatory ways, why? One way to theorize these persistent disparities is through anti-Blackness, which draws attention to the structural conditions that make Black youth more vulnerable to surveillance, punishment, and continued system involvement.

Antiblackness

Antiblackness is an ontological condition that positions Blackness as antithetical to what it means to be human (Patterson, 1982; Wilderson, 2010). In this framework, Blackness is constituted through exclusion from the category of the human. Patterson (1982) conceptualizes slavery not simply as a labor relation, but as a social condition of social death marked by domination, dishonor, and exclusion from the social and political community. The slave is distinguished from the free through the loss of rights, protection, kinship, and social recognition. Under a liberal framework, emancipation would appear to restore the rights and protections denied under slavery. Although emancipation formally ended chattel slavery, it did not secure Black people's transition from slave to fully human subject (Hartman, 1997). This paradox reflects the persistence of social death beyond slavery's formal abolition (Hartman, 1997; Patterson, 1982).

At the root of antiblackness, is the idea that the category of the human is constituted through the exclusion of Blackness. Hartman (1997) argues that emancipation did not make freedom universally available, because access to full personhood remained tied to whiteness. If freedom and humanity are organized around whiteness, then Blackness remains positioned outside the terms through which freedom is recognized (Marriott, 2018; Wilderson, 2010). In this framework, Blackness remains tethered to the figure of the slave and to a condition of social and ontological exclusion. From this perspective, slavery is not merely a historical event but the constitutive condition through which Blackness is made legible in modernity (Marriott, 2018; Wilderson, 2010).

Although Black youth are not literally enslaved, the afterlife of social death can be observed in the ways they are denied innocence, cast as more culpable, and subjected to intensified surveillance. These dynamics appear in empirical research showing that Black youth are more likely to be perceived as older, more blameworthy, and more threatening than their White peers (Bridges & Steen, 1998; Fader et al., 2014; Graham & Lowery, 2004; Piquero, 2008). Consistent with this pattern, studies find that Black youth are more likely than White and Latino youth to be formally charged for similar conduct, confined more harshly, and exposed to higher rates of police contact (Crutchfield et al., 2012; Legewie & Fagan, 2019; National Council on Crime and Delinquency, 2007; Piquero, 2008). These patterns suggest that Black youths' justice-system outcomes may reflect not only assessed risk or behavior, but also the racialized conditions under which innocence, danger, and capacity to reform are interpreted.

Despite these theoretical and empirical insights, existing research has rarely examined whether commonly used risk assessment frameworks are sufficient to account for observed racial disparities in system involvement. Much of the literature treats individual-level risk factors and structural explanations as separate lines of inquiry, rather than assessing whether risk-based models fully explain differences in outcomes across racial groups. As a result, it remains unclear whether disparities in recidivism can be attributed to measured risk and related covariates, or whether they persist beyond what these frameworks capture. This study addresses this gap by examining whether dynamic risk and observed background characteristics are sufficient to explain racial disparities in subsequent system involvement among youth.

Current Study

The present study addresses this gap by examining whether racial disparities persist among youth who are classified as low-risk for recidivism. By focusing on youth who are low-risk, the analysis isolates cases in which risk-based frameworks would predict relatively low and comparable likelihoods of reoffending. This design allows for a direct assessment of whether differences in system involvement remain even among youth with similar measured risk profiles.

More specifically, the study evaluates whether the assumptions underlying the RNR model hold equally across racial groups. Three hypotheses guide the analysis. First, consistent with the RNR framework, recidivism rates are expected to increase across low-, moderate-, and high-risk categories. Second, among low-risk youth, race is not expected to be significantly associated with one-year recidivism. Third, racial differences in

recidivism among low-risk youth are expected to disappear after balancing Black and White youth on observed criminogenic and contextual factors using propensity score methods.

METHODOLOGY

Participants

The present study uses data from wave 1 of the Florida Department of Juvenile Justice (FDJJ) community placement study (Wolff, 2020). The analysis focuses on the first assessment to capture baseline risk prior to supervision and intervention, rather than risk measured after youth have been exposed to treatment or system responses. The dataset includes youth who completed a community-based FDJJ placement across the state of Florida between July 1, 2015, and June 30, 2018. Community-based placements included formal diversion, probation supervision, day treatment/day reporting, and intensive family therapy as an overlay to probation supervision. FDJJ maintains a centralized information system containing demographic information, offense history, placement history, and risk/needs assessment data for youth referred for delinquency. All youth formally processed into the Florida juvenile justice system are assessed using the Community Positive Achievement Change Tool (C-PACT).

The analytic sample was drawn from the larger parent study, which excluded youth with fewer than four C-PACT assessments and youth classified as “other” or “unknown” race/ethnicity. Most items in the C-PACT are self-reported during semi-structured interviews as a part of the C-PACT assessment. Criminal history items,

however, are derived from administrative FDJJ data. The resulting statewide, multiyear sample included 7,117 youth. Of those youth, 2,373 youth fell into the low-risk category.

Consistent with the parent FDJJ study (Wolff et al., 2023), the present analysis uses the available prescreen dynamic risk measure rather than the official categorical C-PACT classification. Because the archived dataset did not include a variable identifying the official overall risk category or the component scores needed to reconstruct it, risk groups were created empirically from the baseline dynamic risk score using tertiles. Based on the distribution of scores, 2,373 youth were classified in the lowest tertile of dynamic risk. Analyses focused on racial disparities within this low-risk group used this subsample, including 717 White youth, 1,344 Black youth, and 312 Hispanic youth. For the propensity score sensitivity analysis, the sample was further restricted to low-risk Black and White youth only, and observations outside the region of common support were trimmed before estimating the final models.

Measures

The dependent variable was a binary indicator of one-year recidivism. Recidivism was coded 1 if a youth experienced any rearrest, readjudication, or placement within one year, and 0 otherwise. This measure was constructed from the three administrative indicators in the dataset: one-year rearrest, one-year readjudication, and one-year placement.

Key Independent Variables

Race/ethnicity was measured using the administrative race/ethnicity variable in the FDJJ dataset. In descriptive analyses and in the logistic regression model estimated

among low-risk youth, race/ethnicity was coded as White, Black, or Hispanic. For the risk-by-race interaction model and the propensity score sensitivity analysis, the sample was restricted to Black and White youth only to facilitate a binary comparison between groups. White youth served as the reference category in regression models.

Dynamic risk was measured using the prescreen C-PACT total dynamic risk index at Wave 1 (Baglivio, 2009; Wolff, 2020). For the main analyses, the sample was restricted to the first assessment so that all measures reflected baseline status at intake. To examine whether recidivism varied by baseline risk, the continuous dynamic risk score was divided into three groups using tertiles. These categories were labeled low, moderate, and high risk. A binary indicator for low-risk was also created for analyses restricted to the lowest-risk group.

Covariates

Covariates included legal, demographic, family, and community characteristics used in the regression and propensity score models. Additionally, two neighborhood-level indices were included: Social Disorganization Index and the Immigrant Concentration Index. The Social Disorganization Index captures broader neighborhood disadvantage and instability. It was constructed using zip code–level indicators drawn from the American Community Survey, including poverty rates, unemployment, renter occupancy, residential instability, female-headed households, and median family income. These measures were standardized and combined into a single index, with higher values indicating greater levels of structural disadvantage in the surrounding community. The Immigrant Concentration Index captures the presence of immigrant populations within a

neighborhood and was created using standardized measures of the proportion of foreign-born residents, the percentage of Latino residents, and the proportion of linguistically isolated households. Higher values indicate greater immigrant concentration in the local area.

Analytic Strategy

All analyses were conducted in Stata. The analytic strategy proceeded in several stages. First, descriptive statistics were calculated for the full sample, including frequencies and summary statistics for race/ethnicity, baseline dynamic risk, and one-year recidivism. Recidivism rates were then examined across the three baseline dynamic risk categories using cross-tabulations to assess whether the expected Risk-Need-Responsivity (RNR) pattern was present, with higher risk groups exhibiting higher rates of subsequent system involvement.

Second, logistic regression models were estimated to examine racial disparities in recidivism. A full-sample model tested the interaction between race and baseline risk category while adjusting for felony history and prior justice-system history. Marginal predictions were then estimated to compare predicted recidivism across risk categories by race.

Third, analyses were restricted to youth in the low-risk group to examine whether race remained associated with one-year recidivism among youth assessed as lowest risk at intake. A logistic regression model estimated the association between race and recidivism among low-risk youth, controlling for felony history and prior justice-system history.

Although propensity score methods are typically used for causal inference, several studies have applied matching to examine racial disparities descriptively (Gann, 2019; Higgins et al., 2013). Vito et al. (2017) used PSM to compare Black and White motorists with similar situational profiles in traffic stop searches, and Stringer and Holland (2016) used matched samples to assess racial differences in drug sentencing outcomes net of legally relevant factors. Following this approach, the present study uses AIPW to balance low-risk Black and White youth on key covariates and assess whether disparities remain.

Consistent with this approach, the final stage of analysis used a propensity score sensitivity analysis was conducted among low-risk Black and White youth. Propensity scores estimating the probability of being Black relative to White were estimated using logistic regression with the following covariates: felony history, prior justice-system history, prior detention, baseline dynamic risk, social disorganization, age at admission, family incarceration history, family problems history, age at first offense, and gender. Observations with estimated propensity scores below .05 or above .95 were trimmed to improve common support. Racial differences in recidivism were then estimated using augmented inverse-probability weighting (AIPW), a doubly robust estimator that combines inverse-probability weighting based on the propensity score with regression adjustment for the outcome (Kurz, 2022). This approach is useful in observational data because adjusted differences can be estimated after balancing on observed covariates, and the estimator remains consistent if either the treatment model or the outcome model is correctly specified (Glynn & Quinn, 2010). In the present study, AIPW was used to estimate adjusted differences in one-year recidivism between low-risk Black and White

youth after accounting for observed legal, demographic, family, and community characteristics. Covariate balance after weighting was assessed using balance diagnostics.

RESULTS

Descriptives

In the full sample, 51.59 percent recidivated within one year. The racial composition of the sample was 30.67 percent White, 54.76 percent Black, and 14.57 percent Hispanic. 79.25 percent of the sample was male while 20.75 was female. All descriptive statistics and models for estimating the association between race, risk level, and recidivism are derived from this full sample. To examine racial disparities within the group of youth classified as low-risk, a subsample of youth with a low-risk scores was identified (n = 2373). For the PSM sensitivity analysis, the sample was further restricted to low-risk Black and White youth (n = 2,061). Following trimming for common support on the propensity score (pscore < 0.05 or > 0.95), the matched analytic sample used in the AIPW model consists of 1,934 youth.

Table 1 shows descriptive statistics for all variables included in the analysis (N=7,117). The sample had a mean dynamic risk score of 0.02 (SD = 0.45). Approximately 37.1 percent had at least one prior system involvement and 67.4 percent had felony history. Age at first offense is ordinal, so the average (2.26) corresponds to ages 13-14. Additionally, the sample was made up of mostly male youth (79.3 percent). The table includes continuous variables (e.g., age, dynamic risk score) and dichotomous indicators (e.g., recidivism, prior system involvement history, gender), reflecting the overall distribution of key risk-relevant characteristics.

TABLE 1 Descriptive Statistics for Full Sample

Variable	N	M	SD	Min	Max
White	7117	.307	.461	0	1
Black	7117	.548	.498	0	1
Hispanic	7117	.146	.353	0	1
Male	7117	.792	.406	0	1
Dynamic risk score (baseline)	7117	.02	.446	-.816	2.207
Any recidivism (1-year)	7117	.516	.5	0	1
Prior system involvement	7117	.371	.483	0	1
Has felony	7117	.67	.496	0	1
Prior detention	7117	1.605	.961	1	4
Social disorganization	7117	.46	.798	-2.066	2.957
Immigration concentration	7117	.033	.84	-.908	4.919
Age at release	7117	17.11	1.374	9.199	21.426
Age at first offense (ordinal category)	7117	2.258	.987	1	4

Risk Recidivism Pattern (RNR Assumption Check)

To verify that the dynamic risk categories behaved as expected under the RNR framework, recidivism rates were examined across low-, moderate-, and high-risk groups. As shown in Table 1, among low-risk youth, 46.82% recidivated within one year, compared to 55.02% of moderate-risk youth and 53.86% of high-risk youth. Although recidivism did not increase strictly monotonically from moderate to high risk, both higher-risk groups exhibited greater recidivism than the low-risk group. This pattern

indicates that the risk categories differentiate youth in the expected direction and provides initial support for the construct validity of the C-PACT dynamic score.

Racial Disparities in Recidivism

Across the full sample, racial disparities emerged in recidivism rates one year after initial justice system contact. More than half of Black youth recidivated (54.99%), compared to 53.23% of Hispanic youth and 44.75% of White youth. These disparities persisted even when restricting the sample low-risk youth. Among low-risk youth, 51.49% of Black youth recidivated within one year, compared to 38.77% of White youth and 45.19% of Hispanic youth. The persistence of these gaps among youth with similarly low dynamic risk scores suggests that recidivism differences are not fully explained by baseline risk assessments, motivating the multivariate and propensity score analyses that follow.

Race and Recidivism Among Low-Risk Youth

To assess whether racial disparities in recidivism persisted after isolating youth with comparable baseline risk, a logistic regression model (Table 2) was estimated predicting one-year recidivism among youth designated as low-risk (n = 2,373). Race was included as the focal predictor, with White youth serving as the reference group, while controlling for felony history and prior system involvement.

Results indicated that race remained a significant predictor of recidivism within the low-risk subsample, even after controlling for felony history and prior system involvement. Black youth had significantly higher odds of recidivating than White youth, while Hispanic youth showed intermediate rates that were not statistically distinct from

White youth at the conventional .05 threshold. Predicted probabilities from the margins analysis further illustrate these differences: 38.96% of low-risk White youth recidivated, compared to 51.35% of low-risk Black youth and 45.32% of low-risk Hispanic youth.

These findings demonstrate that racial disparities in recidivism are not fully accounted for by dynamic risk scores at intake. Even when youth begin supervision with similarly low assessed risk, Black youth are substantially more likely to recidivate within a year, suggesting the presence of factors beyond individual risk characteristics that shape supervision outcomes.

TABLE 2 Logistic Regression Predicting Recidivism Among Low-Risk Youth

Recidivism	b	SE	z	p	95% CI	
Black	0.504	0.094	5.35	< .001	[0.319,	0.689]
Hispanic	0.262	0.137	1.91	.057	[-0.007,	0.531]
Felony history	-0.248	0.098	1.48	1.40	[-0.440,	-0.056]
Prior system involvement	0.137	0.093	1.48	0.140	[-0.045,	0.320]
Constant	-0.328	0.101	-3.26	< .001	[-0.525,	-0.130]

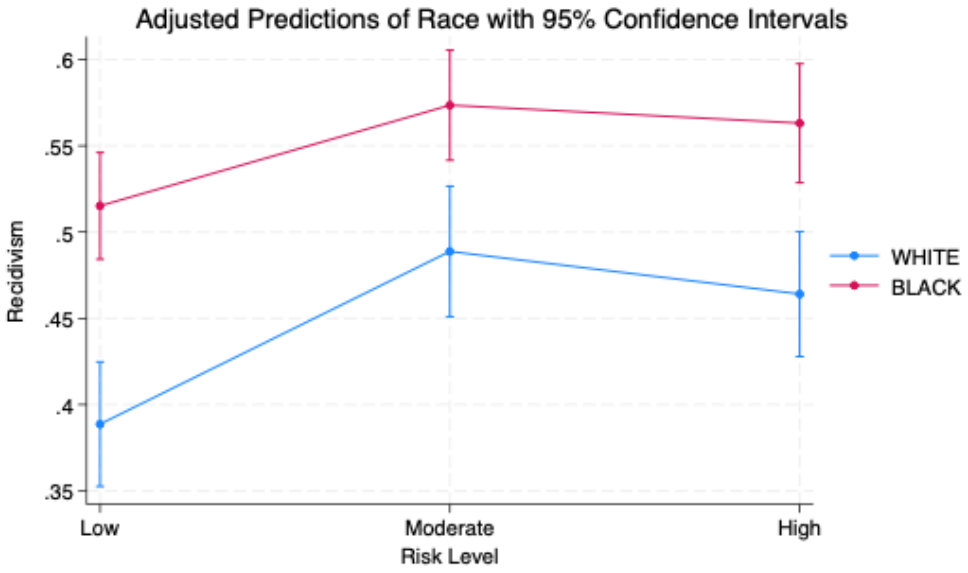
N = 2,373. Pseudo R^2 = .0115.

Risk X Race Interaction Model

To formally test whether the Black-White disparity in recidivism varied across risk levels, a logistic regression model with a Race × Risk interaction was estimated among Black and White youth (Figure 1). Race was coded dichotomously, with White youth as the reference group and Black youth coded as the comparison group. Risk level was coded categorically from the tertiles of the baseline dynamic risk score, with low-risk as the reference category and moderate and high-risk groups entered as indicator

variables. Consistent with the descriptive patterns, both moderate-risk youth ($b = 0.41, p < .001$) and high-risk youth ($b = 0.31, p = .004$) had higher odds of recidivism than low-risk youth. Black youth also had significantly higher odds of recidivism overall than White youth ($b = 0.51, p < .001$). The interaction terms between race and risk were not statistically significant, indicating that the Black-White disparity in recidivism remained relatively consistent across low-, moderate-, and high-risk groups. Predicted probabilities from the margins analysis are displayed in Figure 1. Across all three risk categories, Black youth consistently exhibited higher recidivism probabilities than White youth. Among low-risk youth, the predicted probability of recidivism was 0.52 for Black youth compared to 0.39 for White youth. This gap persisted at the moderate-risk **(**0.57 vs. 0.49**)** and high-risk **(**0.56 vs. 0.46**)** levels. Overall, these findings indicate that the C-PACT risk categories differentiate youth in the expected direction, but substantial Black-White disparities in recidivism remain even after accounting for risk level.

Figure 1



Propensity Score Matching Sensitivity Analysis

To assess whether the racial disparity among low-risk youth persisted after balancing on observed confounders, a Propensity score matching (PSM) sensitivity analysis was conducted (Table 3). The analysis was restricted to youth classified as low-risk and identified as either Black or White (n = 1,934). Scores below .05 or above .95 were trimmed to improve common support. Trimming in this way removes cases whose predicted probability of group membership falls outside of the overlapping region of the propensity score distribution, where comparable cases across groups are limited. Propensity scores were estimated using a logistic regression model predicting treatment status (Black = 1, White = 0) from felony history, dynamic risk score, social disorganization, age at admission, prior system involvement, family incarceration, family problems, age at first offense, and gender.

Balance diagnostics indicated substantial improvement in covariate balance after weighting. Before weighting, the largest imbalance was observed for social disorganization (standardized difference = 0.952), with smaller but still notable imbalances for family problems, detention history, felony history, and age at admission. After weighting, standardized differences for all included covariates were reduced to below 0.10 in absolute value, indicating good balance on the observed characteristics used in the propensity score model.

Following balance adjustment, the AIPW model estimated the mean probability of recidivism for low-risk White youth as 0.425, compared to 0.526 for low-risk Black youth. This corresponds to an adjusted Black-White difference of approximately 0.101 ($SE = 0.028, z = 3.63, p < .001, 95\%\ CI[0.046, 0.155]$), indicating that Black youth remained significantly more likely to recidivate even after balancing on observed background characteristics and baseline risk-related factors.

These results suggest that the disparity observed among low-risk youth is not fully explained by the measured covariates included in the propensity score model. Even after adjusting for differences in legal history, family context, neighborhood disadvantage, and baseline risk, Black youth classified as low-risk continued to face a substantially higher probability of recidivism than comparable White youth.

TABLE 3. AIPW Results for Low-Risk Black vs White Youth

Group	Predicted Probability	SE	95% CI
White (0)	0.425	0.023	[0.381, 0.470]
Black (1)	0.526	0.016	[0.494, 0.558]
ATE (Black – White)	0.101***	0.028	[0.046, 0.155]

*** $p<.01$

DISCUSSION

This study examined whether racial disparities in juvenile recidivism persist among youth whose baseline dynamic risk scores fell within the lowest risk category created from the distribution of the dynamic risk measure at intake. Across descriptive, multivariate, and propensity score-weighted analyses, the findings show a consistent pattern: Black youth recidivate at higher rates than White youth even when they begin supervision with similar baseline risk classification and, in adjusted models, comparable observed background characteristics. This suggests that racial gaps in system outcomes are not fully explained by differences in assessed risk.

These results align with previous research documenting racialized disparities in juvenile justice outcomes even after accounting for legal factors and risk assessments. Under the RNR framework, youth with low dynamic risk scores are expected to exhibit relatively low rates of reoffending; however, this pattern did not hold uniformly across racial groups. The presence of disparities within the low-risk category raises questions about how risk is operationalized and how youth move through community supervision. Prior work suggests that structural and contextual factors, including differential surveillance, variation in system responses, and the broader social conditions in which youth live, shape recidivism outcomes beyond individual-level risk indicators (Craig et al., 2021; Holloway et al., 2022; Legewie & Fagan, 2019). Findings from this study are

consistent with that research and indicate that risk assessment scores alone cannot fully explain or predict the experiences of youth once they enter the justice system.

Although risk categories were constructed using tertiles to facilitate comparison across groups, the underlying distribution of dynamic risk scores in this sample was not uniform. Risk scores were moderately right skewed, with the majority of youth clustered at lower levels of risk and a smaller proportion exhibiting higher risk scores. As a result, the "low-risk" category reflects a relative position within the sample rather than a group of uniformly minimal risk. This distinction is important for interpreting the findings, as it suggests that observed disparities among low-risk youth emerge even within the lower end of a naturally skewed distribution of assessed need.

The observed disparities among youth in the low-risk category may be understood through the lens of anti-Blackness. Within an anti-Blackness framework, Black youth are more likely to be perceived as older, more culpable, and more threatening than their White peers (Bridges & Steen, 1998; Fader et al., 2014; Graham & Lowery, 2004; Piquero, 2008). Additionally, they are more likely to experience intensified police contact and harsher system responses to similar conduct (Lehmann & Meldrum, 2024; Ridolfi et al., 2016). From this perspective, the higher rates of subsequent system involvement observed among Black youth in the low-risk group may reflect not only individual behavior or assessed criminogenic needs, but also the racialized conditions under which behavior is monitored, interpreted, and sanctioned. In this sense, policing, surveillance, and differential system response can be understood as concrete manifestations of anti-Blackness within juvenile justice processing.

Although anti-Blackness is often theorized as an ontological condition, it can be operationalized quantitatively through patterns of differential exposure to surveillance, system contact, and institutional response (Padgaonkar et al., 2021). For example, disparities in police contact, supervision intensity, technical violations, and recidivism among similarly situated youth may serve as observable indicators of how anti-Blackness operates within the justice system. In Wacquant's *Race as a Civic Felony* (2005), race itself is conceptualized as functioning as a form of civic status that structures individuals' relationships to the state, including their likelihood of being monitored, sanctioned, or re-incorporated. From this perspective, racial disparities in outcomes among low-risk youth are not simply residual differences after accounting for risk factors but may reflect the ways in which race organizes exposure to punishment and surveillance. Future research could build on this approach by incorporating measures of supervision intensity, police contact, and neighborhood-level enforcement patterns to more directly assess how anti-Blackness shapes justice-system outcomes.

The multivariate analyses reinforce this conclusion. The Race × Risk interaction model demonstrated that recidivism was higher among moderate- and high-risk youth than among low-risk youth, as expected under the RNR framework, but Black youth had higher recidivism probabilities than White youth at each level of risk. At the same time, the interaction terms were not statistically significant, indicating that the Black-White disparity remained relatively consistent across low-, moderate-, and high-risk groups rather than varying significantly by risk level. Within the low-risk subsample, logistic regression indicated significantly higher odds of recidivism for Black youth compared to

White youth. The AIPW model, which balanced observed covariates between Black and White youth, further showed that racial disparities persisted even after adjusting for felony history, detention and placement history, age at admission, family context, and neighborhood disadvantage. Taken together, these findings suggest that the disparity is robust and not an artifact of model specification or sample composition.

Model adequacy checks provide additional assurance that the findings are reliable. Balance statistics following AIPW weighting showed substantial improvement in covariate balance. Before weighting, the largest imbalance was observed for social disorganization, but after weighting all standardized mean differences were reduced below conventional thresholds of 0.10 in absolute value, indicating successful adjustment for observed confounding. The consistency of results across descriptive, regression, and propensity score-weighted models strengthens confidence in the central conclusion.

Several limitations qualify these findings. First, the analysis relies on administrative measures of recidivism, which may reflect differences in surveillance intensity rather than true behavioral differences. Youth under closer supervision or living in communities subject to greater police presence may be more likely to incur official contacts for similar behavior than youth who experience less monitoring. As a result, observed recidivism differences may partly reflect variation in institutional responses and exposure to surveillance rather than differences in underlying offending. This limitation is particularly relevant when examining racial disparities, as prior research has documented racialized differences in policing, supervision intensity, and system processing that shape the likelihood that behavior results in official justice-system

involvement. Prior research shows that self-reported and official measures of delinquency are related but not interchangeable, suggesting that they reflect different indicators of youth offending and legal contact (Holloway et al., 2024; Pollock et al., 2015). This suggests that observed disparities in administrative outcomes may reflect differences in system exposure and institutional response in addition to underlying behavior. As a result, recidivism measure through official justice-system contact may reflect both youth behavior and the institutional contexts through which youth move while under supervision. Second, although the AIPW approach improves covariate balance, unobserved confounders cannot be ruled out. Future research could extend this analysis using survival models, longer follow-up periods, and measures that combine official records with self-reported offending.

CONCLUSION

This study examined whether Black and White youth classified as low risk by the C-PACT recidivate at similar rates. Across descriptive, multivariate, and propensity-score adjusted analyses, Black youth consistently exhibited higher recidivism despite comparable dynamic risk profiles. These findings challenge assumptions underlying the RNR framework, which expects low-risk youth to desist with minimal intervention. Instead, the results point toward structural and institutional factors shaping recidivism beyond individual risk. Future work should incorporate richer measures of context, explore mechanisms that link race to system response, and assess whether risk instruments systematically under capture the burdens Black youth face.

REFERENCES

Abrams, L. S., Mizel, M. L., & Barnert, E. S. (2021). The Criminalization of Young Children and Overrepresentation of Black Youth in the Juvenile Justice System. *Race and Social Problems*, *13*(1), 73–84. https://doi.org/10.1007/s12552-021-09314-7

Andrews, D. A., Bonta, James, & Hoge, R. D. (1990). Classification for effective rehabilitation: rediscovering psychology. Criminal Justice and Behavior, 17(1), 19-52.

Baglivio, M. T. (2009). The assessment of risk to recidivate among a juvenile offending population. *Journal of Criminal Justice*, *37*(6), 596–607. https://doi.org/10.1016/j.jcrimjus.2009.09.008

Bonta, J., & Andrews, D. A. (2007). Risk-need-responsivity model for offender assessment and treatment (User Report No. 2007-06). Public Safety Canada.

Bonta, James, and D. A. Andrews. *The Psychology of Criminal Conduct*. Sixth edition., Routledge, 2017, https://doi.org/10.4324/9781315677187

Bridges, G. S., & Steen, S. (1998). Racial disparities in official assessments of juvenile offenders: Attributional stereotypes as mediating mechanisms. *American Sociological Review, 63*(4), 554–570. https://doi.org/10.2307/2657267

Chua, J. R., Chu, C. M., Yim, G., Chong, D., & Teoh, J. (2014). Implementation of the Risk–Need–Responsivity Framework across the Juvenile Justice Agencies in

Singapore. *Psychiatry, Psychology and Law*, *21*(6), 877–889. https://doi.org/10.1080/13218719.2014.918076

Craig, J. M., Wolff, K. T., & Baglivio, M. T. (2021). Resilience in Context: The Association between Neighborhood Disadvantage and Cumulative Positive Childhood Experiences among Justice-Involved Youth. *Crime & Delinquency*, *67*(11), 1647–1675. https://doi.org/10.1177/00111287211029852

Crutchfield, R. D., Skinner, M. L., Haggerty, K. P., McGlynn, A., & Catalano, R. F. (2012). Racial Disparity in Police Contacts. *Race and Justice*, *2*(3), 179–202. https://doi.org/10.1177/2153368712448063

Fader, J. J., Kurlychek, M. C., & Morgan, K. A. (2014). The color of juvenile justice: Racial disparities in dispositional decisions. *Social Science Research*, *44*, 126–140. https://doi.org/10.1016/j.ssresearch.2013.11.006

Gann, S. M. (2019). Examining the Relationship Between Race and Juvenile Court Decision-Making: A Counterfactual Approach. *Youth Violence and Juvenile Justice*, *17*(3), 269–287. https://doi.org/10.1177/1541204018806976

Gearhart, M. C., & Tucker, R. (2020). Criminogenic Risk, Criminogenic Need, Collective Efficacy, and Juvenile Delinquency. *Criminal Justice and Behavior*, *47*(9), 1116–1135. https://doi.org/10.1177/0093854820928568

Graham, S., & Lowery, B. S. (2004). Priming unconscious racial stereotypes about adolescent offenders. *Law and Human Behavior, 28*(5), 483–504.

Glynn, A. N., & Quinn, K. M. (2010). An Introduction to the Augmented Inverse Propensity Weighted Estimator. *Political Analysis*, *18*(1), 36–56. https://doi.org/10.1093/pan/mpp036

Hartman, S. (1997). *Scenes of subjection: Terror, slavery, and self-making in nineteenth-century America*. Oxford University Press.

Higgins, G. E., Ricketts, M. L., Griffith, J. D., & Jirard, S. A. (2013). Race and Juvenile Incarceration: A Propensity Score Matching Examination. *American Journal of Criminal Justice*, *38*(1), 1–12. https://doi.org/10.1007/s12103-012-9162-6

Holloway, E. D., Folk, J. B., Ordorica, C., & Tolou-Shams, M. (2022). Peer, substance use, and race-related factors associated with recidivism among first-time justice-involved youth. *Law and Human Behavior*, *46*(2), 140–153. https://doi.org/10.1037/lhb0000471

Holloway, E. D., Irgens, M., McPhee, J., Folk, J. B., & Tolou-Shams, M. (2024). Youth recidivism: Youth self-report matters. *Frontiers in Psychology*, *14*, 1208317. https://doi.org/10.3389/fpsyg.2023.1208317

Icenogle, G., Steinberg, L., Duell, N., Chein, J., Chang, L., Chaudhary, N., Di Giunta, L., Dodge, K. A., Fanti, K. A., Lansford, J. E., Oburu, P., Pastorelli, C., Skinner, A. T., Sorbring, E., Tapanya, S., Uribe Tirado, L. M., Alampay, L. P., Al-Hassan, S. M., Takash, H. M. S., & Bacchini, D. (2019). Adolescents' cognitive capacity reaches adult levels prior to their psychosocial maturity: Evidence for a "maturity gap" in a

multinational, cross-sectional sample. *Law and Human Behavior*, *43*(1), 69–85. https://doi.org/10.1037/lhb0000315

Kurz, C. F. (2022). Augmented Inverse Probability Weighting and the Double Robustness Property. *Medical Decision Making*, *42*(2), 156–167. https://doi.org/10.1177/0272989X211027181

Legewie, J., & Fagan, J. (2019). Aggressive Policing and the Educational Performance of Minority Youth. *American Sociological Review*, *84*(2), 220–247. https://doi.org/10.1177/0003122419826020

Lehmann, P. S., & Meldrum, R. C. (2024). Disparities in Youth Arrest Across Racial and Ethnic Subgroups. *Youth Violence and Juvenile Justice*, *22*(1), 22–45. https://doi.org/10.1177/15412040231186337

Marriott, D. (2018). *Whither fanon? Studies in the blackness of being*. Stanford University Press.

Montes, A. N., Mears, D. P., & Stewart, E. A. (2020). Racial and Ethnic Divides in Privatized Punishment: Examining Disparities in Private Prison Placements. *Justice Quarterly*, *37*(5), 930–954. https://doi.org/10.1080/07418825.2019.1675747

National Council on Crime and Delinquency. (2007). *And justice for some: Differential treatment of youth of color in the justice system* (SRI A7575-8).

Padgaonkar, N. T., Baker, A. E., Dapretto, M., Galván, A., Frick, P. J., Steinberg, L., & Cauffman, E. (2021). Exploring Disproportionate Minority Contact in the Juvenile

Justice System Over the Year Following First Arrest. *Journal of Research on Adolescence*, *31*(2), 317–334. https://doi.org/10.1111/jora.12599

Patterson, O. (1982). *Slavery and social death: A comparative study*. Harvard University Press.

Piquero, A. R. (2008). Disproportionate Minority Contact. *The Future of Children*, *18*(2), 59–79. https://doi.org/10.1353/foc.0.0013

Pollock, W., Menard, S., Elliott, D. S., & Huizinga, D. H. (2015). It's Official: Predictors of Self-Reported vs. Officially Recorded Arrests. *Journal of Criminal Justice*, *43*(1), 69–79. https://doi.org/10.1016/j.jcrimjus.2014.12.004

Ridolfi, L., Washburn, M., & Guzman, F. (2016). *The prosecution of youth as adults: A county-level analysis of prosecutorial direct file in California and its disparate impact on youth of color*. W. Haywood Burns Institute, Center on Juvenile and Criminal Justice, & National Center for Youth Law.

Rovner, J. (2016). Racial disparities in youth commitments and arrests. Washington, DC: The Sentencing Project. Retrieved from: https://www.sentencingproject.org/publications/racial-disparitie s-in-youth-commitments-and-arrests/.

Steinberg, L., Albert, D., Cauffman, E., Banich, M., Graham, S., & Woolard, J. (2008). Age differences in sensation seeking and impulsivity as indexed by behavior and self-report: Evidence for a dual systems model. *Developmental Psychology*, *44*(6), 1764–1778. https://doi.org/10.1037/a0012955

Stringer, R. J., & Holland, M. M. (2016). It's not all black and white: A propensity score matched, multilevel examination of racial drug sentencing disparities. *Journal of Ethnicity in Criminal Justice*, *14*(4), 327–347. https://doi.org/10.1080/15377938.2016.1187239

Vito, A. G., Grossi, E. L., & Higgins, G. E. (2018). Analyzing racial profiling from traffic searches: Using focal concerns theory and propensity score matching. *Policing: An International Journal*, *41*(6), 721–733. https://doi.org/10.1108/PIJPSM-06-2017-0081

Wacquant, L. (2005). Race as civic felony. *International Social Science Journal*, *57*(183), 127–142. https://doi.org/10.1111/j.0020-8701.2005.00536.x

Wilderson III, F. B. (2010). *Red, white & black: Cinema and the structure of U.S. antagonisms*. Duke University Press.