

Assessing Racial Effects on Adjudicative Competence

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As racial influences on forensic outcomes are identified in every aspect of practice, scholars are exploring methods to disentangle race from its historical, economic, and attitudinal antecedents. Because jurisdictions vary in these influences, definitions and data may differ among them, creating inconsistencies in analysis and policy. This retrospective database review compared differences in racial outcomes among 200 pretrial defendants, 160 Black and 40 White, exploring a wide range of socioeconomic, clinical, and forensic influences before, during, and after hospitalization. Because of the tight relationship of socioeconomic factors and race, investigators hypothesized that it would be difficult to distinguish racial influences alone. Using a confirmatory approach to data collection and a statistical analysis based in logistic regression, only differences in referral for psychological testing were identified. Application of this method based on local demographics and culture may prove useful for institutions interested in evaluating racial influences on forensic outcomes.

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As the understanding of racial determinants of mental health grows, forensic psychiatry is exploring the racial influences on the forensic mental health system. Poor access to mental health care among marginalized groups is matched by forensic research showing higher rates of forced medication, restraint or seclusion, and diagnosis of psychotic disorders. This trend is also true of the referral for evaluation and restoration of competence to stand trial and time to competence restoration, especially among persons of color.^{1–9} With commentators calling for examination of the structural effects on forensic outcomes, the influence of race on the treatment

of justice-involved persons is receiving increased attention.^{10–12}

Yet, empirical findings can be equivocal. Even the classic review of the Epidemiologic Catchment Area Survey found that the higher incidence of schizophrenia among Black respondents disappeared when socio-demographic variables were included in the analysis.¹³ And some studies of adjudicative competence have not found expected racial disparities. Mossman¹⁴ and Morris and Parker,¹⁵ for example, identified trends in which non-African American ethnicity was associated with a decreased likelihood of competence restoration in Ohio and Indiana, respectively, in the 1990s and early 2000s.

Race is a cardinal demographic in virtually all human subjects research, although it is typically used as a descriptor. But race is a social construct, and studies attempting to clarify its impact must consider the complex associations of race, from its stereotypical origins in unfounded biological theories to recent reliance on self-report.¹⁶ For example, in part owing to racist legacies such as red-lining, U.S. residents still live and expend their capital in largely homogeneous neighborhoods, making it more difficult to distinguish racial, economic, and other structural factors.¹⁷ One key variable connecting neighborhood and race is socioeconomic status, which itself is multi-determined.

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Differences in how socioeconomic status is measured and linked to race contribute to inconsistencies among studies.^{17–20} Nondiverse samples, incomplete economic data, and limited exposure to other races make it difficult to distinguish historical, economic, and racial influences. Research design and analysis must consider local variables and confirmatory data that can compensate for segregation and imperfect information.

The purpose of this study is to offer analysis for a fraught social problem through methods that disentangle the varied influences likely to affect racial differences. The forensic outcomes affecting Black and White defendants in the inpatient setting, for example, can be expected to differ in similar ways to mental health care access and diagnosis. Defendants admitted specifically for evaluation of competence to stand trial (CST) and restoration are especially vulnerable to the structural influences that lead individuals to the forensic rather than the health care system. Forensic admissions to state hospitals are increasing significantly,^{21–23} with inpatient CST referral and restoration providing the majority of new admissions. This choice commits defendants to a more restrictive alternative than the more common outpatient evaluation. The inpatient setting consequently provides the context for the present study of social and racial influences.^{21–23}

In Washington D.C., pretrial defendants enter the hospital in two ways: After initial screening at the courthouse by forensic psychologists, the court may order the defendant committed for an inpatient examination after a finding that inpatient placement is necessary for an adequate examination; or if the defendant is unlikely to comply with an outpatient order (DC Code § 24–531.03(e)). Other defendants may be ordered into the inpatient setting if the court decides treatment is necessary for restoration. Appropriate treatment and the likelihood of complying with an outpatient evaluation drive the decision (DC Code § 24–531.05(2)). All inpatient pretrial defendants undertake a formal CST evaluation.

Inpatient pretrial defendants may be returned to jail, remain at the hospital for restoration or maintenance of competence, or be released to the community following the evaluator's recommendation and the court's formal finding. The evaluatee's history of adherence to court orders, past restoration and treatment efforts, and adherence to treatment figure prominently in the evaluator's recommendations and the court's finding.

Following the literature^{1–12} and consulting with epidemiologists studying racial determinants at three Eastern U.S. schools of public health, we hypothesized that Black defendants were more likely to be charged with felonies and violent misdemeanors, diagnosed with a thought disorder, denied access to psychological testing, prescribed antipsychotic medication, restrained or secluded, found incompetent, detained longer, and returned to jail when compared with their White counterparts. Because race is so closely embedded in social structures, however, we expected few differences to remain once socioeconomic characteristics were considered.

Methods

This retrospective review was approved by the Saint Elizabeths Hospital and Department of Behavioral Health Institutional Review Board and conducted at Saint Elizabeths Hospital (SEH) in Washington D.C., the jurisdiction's lone forensic facility. The sample was composed of 200 defendants who were court-ordered to undergo inpatient evaluation for CST and potential restoration between January 2017 and December 2019. This period reflects most recent hospital practices unaffected by the COVID-19 pandemic. During this time, 1,001 pretrial defendants were admitted, 852 of whom were Black and 63 White. A power analysis using results from a restoration study conducted at the same institution²⁴ indicated that with an expected sample size of 160 Black and 40 White admissions there is adequate power (80%) to detect a medium effect size ($d = .5$), assuming alpha of .05. With 38 persons identifying as African, 35 as Hispanic, six as Asian American and Pacific Islander, four as Middle Eastern, and three as Other, there was insufficient power to conduct other analyses. Indeed, the special historical significance of health care inequities among Black patients and Washington's history as a city sensitive to the concerns of Black communities dictated the comparison. A random number generator was used to select cases for review.

Charts were reviewed to ensure that patients identified themselves as Black or White; charts with discrepancies were excluded. Others were excluded if the court had not ruled on the defendant's competency by the time data were gathered for this study.

Measures

Demographic and Socioeconomic Variables

Age was categorized into the following intervals: 30 and younger, 31 to 40, 41 to 50, 51 to 60, and more than 60 years old. Because of the institution's binary classification system, sex was recorded as either male or female. Educational attainment was categorized as less than high school, high school or equivalent, some college, or completed college (including both undergraduate and graduate school). Health insurance as an indicator of access to care and benefits was grouped into public (Medicaid, Medicare, TRICARE), private, or uninsured categories. Building on Bureau of Justice Statistics classifications,²⁵ housing status was categorized as undomiciled, supportive (i.e., group home, independent living facility, assisted living facility, halfway house), rent, own, or residing with family or friends. Government benefits, part of documentation at admission, were also queried: Social Security Disability Insurance (SSDI), Supplemental Security Income (SSI), retirement, and Temporary Assistance for Needy Families (TANF) were coded either present or not.

Clinical Variables

Psychiatric diagnoses were categorized as "thought disorder" (e.g., schizophrenia, schizoaffective disorder, psychotic disorder not otherwise specified), "mood and anxiety disorder" (e.g., major depressive disorder, bipolar disorder type I and II, generalized anxiety disorder), and "other" (e.g., personality disorder, neurocognitive disorder, substance use or substance-induced disorder).

Both the prescription of antipsychotic medication and its involuntary application were coded as either present or not. This approach did not identify first- or second-generation medicines, dosing, or defendants for whom medications were prescribed but not taken.

Because of the availability of psychological testing at the hospital, testing referrals were included both as a proxy for access to resources and as an indicator of more complex or serious diagnoses. Referral was coded as present or not. Repeat testing is generally not ordered for defendants who were tested during a recent admission, so any defendant who undertook testing within the previous five years was considered to have a positive referral.

Data were collected by chart review and review of the hospital's court database. This review included

intake and discharge documents written by unit social workers, psychologists, and psychiatrists, as well as medication orders, restraint or seclusion orders, psychological reports, competence evaluation reports, pretrial admission reports, and civil commitment reports. Because socioeconomic and demographic data can be incomplete in examinations of race, this comprehensive, confirmatory approach was undertaken to substantiate the presence of the study's dependent variables.

Forensic Variables

Variables determined by evaluators or formal court decisions were classified as forensic. Outcomes are consequently affected by systems outside hospital walls. The information relevant to these variables was gathered from the D.C. superior court online database and confirmed by chart review.

Time to attain competence was calculated by computing the number of days between the defendant's admission and the court's final competence ruling. Because evaluations are typically ordered every 30 days if competence is not attained, this variable was coded in 30-day intervals. Restoration may occur contemporaneously with assessment, so time to attain competence can include both assessment and restoration, namely for defendants who have only been screened at the courthouse or for defendants who attend restoration groups as they undergo evaluation.

Few defendants required more than 120 days and were collapsed into the group "more than 120 days." The court's disposition was categorized as "return to jail," "remain at SEH," "return to the community with Pretrial Services Agency (PSA) supervision," and "return to the community without supervision."

Statistical Analysis

Descriptive statistics were used to summarize the sample characteristics by race, including demographic, clinical, and forensic variables. Univariate analysis was used to evaluate normality for continuous variables and the frequency distribution for categorical variables. Bivariate analysis (using chi-square tests for categorical variables, Kruskal-Wallis tests for ordinal variables, or *t* tests for continuous variables) was used to assess crude associations between race and clinical and forensic outcomes as well as to assess potential confounding by demographic variables. Confounding was evaluated by regressing the exposure (race) on the demographic variables. In addition, the outcomes were regressed on the demographics

Table 1 Descriptive Statistics

Measure	Black Defendants	White Defendants	Significance
Age, mean (SD), range	38.8 (14.0), 18–74	41.8 (11.4), 21–65	$F = 1.54, P = .2159$
Sex, <i>n</i> (%)	F: 51 (32) M: 109 (68)	F: 7 (18) M: 33 (82)	$\chi^2 = 3.21 (df = 1), P = .073$
High school education or less, <i>n</i> (%)	125 (78)	18 (45)	$\chi^2 = 17.23 (df = 1), P < .0001$
Undomiciled, <i>n</i> (%)	101 (63)	29 (73)	$\chi^2 = 1.24 (df = 1), P = .266$
Unemployed, <i>n</i> (%)	149 (93)	38 (95)	$\chi^2 = 0.19 (df = 1), P = .667$
Uninsured, <i>n</i> (%)	38 (24)	16 (40)	$\chi^2 = 4.29 (df = 1), P = .038$
Government benefits, <i>n</i> (%)	81 (51)	15 (38)	$\chi^2 = 2.21 (df = 1), P = .137$

among the nonexposed individuals in the sample (the White participants).

The bivariate analyses indicated that all demographic variables were associated with race and independently predictive of the outcomes, so they met the criteria for potential confounding. Therefore, all subsequent regression models adjusted for age group, sex, education level, government benefits, health insurance status, and employment status during the last six months. The adjustment of potential confounds was intended to uncover the independent effect of race on outcomes like the return to jail or the evaluator’s assessment.

Multiple logistic regression analyses were then used to test hypotheses of racial differences for each outcome after adjusting for the other demographic variables. This approach assured that any difference in outcomes was attributable to race rather than age, sex, or other potential confounding variables.

Adjusted odds ratios (aOR) and 95 percent confidence intervals were reported. A significance level of $P < .05$ was used for all statistical tests.

Results

Demographics

The mean age of defendants was 38.8 years (range, 18–74) for Black defendants, and 41.8 years (range, 21–65) for White defendants. Seventy-one percent ($n = 142$) were male (68% Black, 82.5% White); 71.5 percent had a high school level of education or less (78% Black, 45% White); 65 percent were undomiciled (63% Black, 72.5% White); and 93.5 percent were unemployed (93% Black, 95% White). Seventy percent held public health insurance (75.6% Black, 47.5% White), whereas 27 percent had no health insurance at all (24% Black, 40% White). At the time of admission, 52 percent were not receiving

any government benefits (49% Black, 62.5% White). No significant differences between Black and White defendants were observed by housing status or government benefits at admission.

Education status varied by race ($P < .001$), with fewer White defendants reporting less than a high school education and more having some college or greater. Health insurance also varied by race ($P < .0001$), with fewer White defendants having public insurance and more having private insurance. All adjusted analyses included these demographic variables (see Table 1).

Clinical Variables

Thought disorder was diagnosed in 67 percent ($n = 134$) of the sample. No statistically significant racial differences were observed by diagnosis or by the prescription of antipsychotic medication after logistic regression and adjustment for all demographics (see Table 2). There was no significant difference in involuntary medication by race after adjusting for demographics.

White defendants were less likely to be referred for psychological testing than expected by chance (chi-square = 5.37, $df = 1, P = .0205$). The odds ratio for referral for psychological testing, compared with no referral, was 3.2 times greater among Black defendants (OR = 3.212; 95% CI, 1.036–9.961), which is statistically significant.

In this sample, there was no statistically significant difference in use of restraint or seclusion. Because the distribution was skewed in each group for both variables, the outcome was dichotomized and analyses repeated. Results again indicated no significant difference in restraint or seclusion by race after adjusting for all demographics (restraint: aOR = 1.555; 95% CI, .462–5.227; seclusion: aOR = .775, 95% CI .310–1.940).

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Table 2 Number, Percent, and Adjusted Odds Ratios (95% CI) for Clinical Variables by Race

Variable	Black Defendants	White Defendants	Crude Black versus White Comparison	Logistic Regression Including Socioeconomic Factors
Thought disorder, <i>n</i> (%)	111 (69)	23 (58)	$\chi^2 = 1.041, df = 1, P = .1531$	aOR ^a = 1.872 (95% CI, ^b 0.847–4.137)
IMP referral, <i>n</i> (%)	17 (11)	8 (25)	$\chi^2 = 2.57, df = 1, P = .11$	aOR = 0.772 (95% CI, 0.266–2.243)
Psychological testing, <i>n</i> (%)	44 (28)	4 (10)	$\chi^2 = 5.37, df = 1, P = .0205$	aOR = 3.212 (95% CI, 1.036–9.961)
Antipsychotic medication, <i>n</i> (%)	138 (86)	34 (85)	$\chi^2 = 0.0415, df = 1, P = .8385$	aOR = 1.584 (95% CI, 0.513–4.886)
Restraint, mean (SD), range	0.5625 (1.990), 0–18	0.1 (0.3038), 0–1	ANOVA $F = 2.14, P = .145$	aOR = 1.555 (95% CI, 0.462–5.227)
Seclusion, mean (SD), range	0.4438 (1.097), 0–7	0.575 (1.824), 0–11	ANOVA $F = 0.34, P = .5606$	OR = 0.775 (95% CI, 0.310–1.940)

Note. ANOVA = analysis of variance; aOR = adjusted odds ratio; CI = confidence interval; IMP = involuntary medication process.

^aaOR after controlling for age, gender, education, housing, employment, insurance, and benefits.

^bIf the 95% CI includes 1.0, then the association is not statistically significant at $P < .05$.

Forensic Variables

Forensic variables are displayed in Table 3. There was no significant difference in the number of charges of violent misdemeanors or felonies by race and after adjusting for other demographics.

There was no statistically significant difference in the evaluators' determination of competence by race in the crude (chi-square = .67, $df = 1, P = .71$) or adjusted analysis (aOR = 1.24; 95% CI, .568–2.711). There was also no statistically significant difference in the court's findings at incompetence hearings.

Although Black defendants required on average an additional 8.4 days (after controlling for demographics) to attain competence compared with White defendants, this finding was not statistically significantly different ($F = .31, P = .578$). Because time to attain competence was a continuous variable, a linear regression model was used to examine time to attain competence by race after adjusting for demographics. This examination indicated no differences by race ($F = .54, P = .82$).

With those staying at Saint Elizabeths Hospital as the referent group, there was no significant difference

observed by race in the disposition to jail or returning to the community. Usually, evaluatees remain at the hospital if they have a history of decompensating in the community or if they have not adhered to past court orders. Although there was a statistically significant difference in the crude association of disposition to a PSA compared with staying at SEH by race (chi-square = 4.48, $df = 1, P = .03$; White defendants were more likely to be ordered to a PSA), the association was no longer statistically significant after adjusting for demographics in a logistic regression model (aOR = .46; 95% CI, .201–1.063).

Discussion

With a well-powered sample in a progressive jurisdiction, there were no racial differences in charges, diagnosis of thought disorder, restraint or seclusion, length of time to competence, competence decisions, and disposition to jail. Given the national overrepresentation of Black citizens in the criminal legal system^{26,27} (supported by recent local data²⁸ as well), it would not be unexpected to find race-sensitive results in forensic mental health. For example,

Table 3 Number, Percent, and Adjusted Odds Ratios (95% CI) for Forensic Variables by Race

Variable	Black Defendants	White Defendants	Crude Black versus White Comparison	Logistic Regression Including Socioeconomic Factors
Number violent felonies, mean (SD), range	0.3188 (0.796), 0–7	0.200 (0.823), 0–5	ANOVA $F = 0.70, P = .4029$	aOR ^a = 2.941 (95% CI, ^b 0.888–9.745)
Time to attain competency in days, mean (SD), range	67.9 (62.79), 8–620	62.2 (35.89), 12–176	$\chi^2 = 4.616, df = 6, P = .5939$	$b^c = 8.37, SE = 11.11$ $t = 0.75, P = .452$
IST (initial evaluation), <i>n</i> (%)	69 (43)	20 (50)	$\chi^2 = 0.67, df = 1, P = .71$	aOR = 1.24 (95% CI, 0.568–2.711)
Return to jail, <i>n</i> (%)	37 (23)	6 (15)	$\chi^2 = 11.19, df = 3, P = .01$	aOR = 1.62 (95% CI, 0.597–4.372)
IST (court finding), <i>n</i> (%)	31 (19)	6 (15)	$\chi^2 = 0.4062, df = 1, P = .5239$	aOR = 1.159 (95% CI, 0.417–3.219)

Note. aOR = adjusted odds ratio; CI = confidence interval; IMP = involuntary medication process; IST = incompetent to stand trial.

^aaOR after controlling for age, gender, education, housing, employment, insurance, and benefits.

^bIf the 95% CI includes 1.0, then the association is not statistically significant at $P < .05$.

^cAdjusted linear regression coefficient indicating a mean difference of 8.37 days after controlling for demographics.

although 46 percent of Washington D.C.'s population identify as Black, they represent 90 percent of individuals in custody.²⁸ A similar overrepresentation was evident in the current study's population. During the study period, although 45 to 47 percent of the city population identified as Black, 86 percent of those arrested were identified as Black, as were 65 percent of all defendants admitted to SEH for evaluation and restoration. In the same period, approximately 45 percent of the city identified as White, whereas White defendants accounted for less than five percent of competence admissions.^{29,30} Thus despite being less than half the city's population, Black citizens represent a significantly larger proportion of the arrested, incarcerated population and of defendants admitted for inpatient evaluation. The hospital may consequently be admitting more persons of color because more are arrested and referred, but, with this sample and power, they appear to be treated similarly in the hospital setting. Because there were few differences by race for measures of SES, one can assume that the effects of race are independent of SES. If there were differences, analysis would uncover which SES measure is driving racial differences.

Black and White defendants were socioeconomically comparable, and adjustments for demographic differences allowed for a robust analysis. Similar to traditional findings of lower socioeconomic status among criminal defendants, the entire sample population demonstrated low educational attainment and high rates of homelessness and unemployment.^{31,32} This finding is a potential explanation for the lack of significant differences despite careful investigation with confirmatory economic data. Moreover, 75 percent of the hospital's psychiatrists identify as persons of color, offering some protection against overdiagnosis, overmedication, and overuse of restraint.^{9,33-37} This protection may not be the case where White clinicians predominate. In addition to a large proportion of judges with a criminal defense background, the political climate of the jurisdiction may offer any number of counterweights to the usual structural inequities of legal and forensic practice.³⁸

Comparable use of antipsychotic medication and its involuntary administration is likely related to the analogous rates of thought disorder in the two groups. Studies have generally reported that Black patients are more likely prescribed antipsychotics, first-generation (older) medicines, and higher doses compared with White patients.³⁹⁻⁴¹ Saint Elizabeths'

experience, however, may be closer to that of a study of psychiatric inpatients that observed that unadjusted rates of emergency medication and seclusion equalized when demographic, antecedent, and incident-specific variables were considered.⁴² Although not statistically significant, it was White defendants in the D.C. sample who were more likely to be ordered involuntary medication.

Although no forensic aspects of CST attained statistical significance (i.e., competence assessment after first evaluation, time to attain competence, and formal incompetence hearing), Black defendants, on average, required an additional 8.4 days to attain competence. This difference may be meaningful to hospitals monitoring length of stay and alert researchers, treaters, and administrators to differences that could arise from a larger sample. A prominent 2011 meta-analysis reporting non-White race as a significant predictor of incompetence included some studies that compared race without additional analysis of variables that could have affected racial disparities.⁴³ For example, a 2003 study of CST predictors included in the meta-analysis reported that defendants with psychosis were more likely to be opined incompetent, with Black defendants more likely to be diagnosed with psychosis compared with White defendants.⁴⁴ This relationship between diagnosis, race, and forensic outcome may well explain the similarity of forensic outcomes in this sample because rates of psychotic disorder were comparable in Black and White groups.

Studies of competence evaluation and restoration have generally highlighted the importance of including additional variables in analysis when comparing outcomes by race. Using logistic regression to include variables that may influence racial differences, two studies of inpatient evaluation and restoration found no relationship between race and competence.^{45,46} Similarly, although Perry *et al.*⁷ found that Black defendants were less likely to be found criminally responsible after statistical analysis controlled for various socioeconomic factors, further analysis revealed that this racial difference was "fully mediated by higher levels of diagnosis with psychotic spectrum disorders among African Americans in the forensic psychiatric facility" (Ref. 7, p 246). Thus, Perry *et al.*⁷ make clear that without analysis of the many variables beyond socioeconomics that may influence racial outcomes (e.g., psychosis), investigators run the risk of reporting data that do not reflect the reality of their population.

Despite the overrepresentation of communities of color in the correctional system, competent Black defendants in this jurisdiction were not more likely to be returned to jail or to remain at the hospital (i.e., for maintenance of competence or for more intensive treatment). Studies of forensic triage and disposition find that Black defendants are more likely referred for CST and ordered to the stricter, inpatient setting.^{7,47} Likewise, minority status has been linked to revocation of conditional release and less time in the community before revocation.^{43,48} Similar to our design, however, Dirks-Linhorst *et al.*'s⁴⁶ more recent finding that Black defendants were more likely in jail at the time of their pretrial referral used logistic regression to show that race was not a factor in subsequent evaluator recommendations, including recommendations for hospitalization. Our result that White defendants were more likely returned to a Pretrial Service Agency will be a focus of future research using variables that could not be examined in this investigation (e.g., more specific diagnoses, histories of trauma, prior dispositions).

Referral for psychological testing differed after socioeconomic and demographic adjustment, with Black defendants more than three times more likely to be referred. Treatment teams in this public sector minority setting did not hesitate to access this resource as might be expected in a setting that denied marginalized patients access to care. The present study is the first analysis we know of that considers this variable both a matter of access and confirmation for diagnostic clarity. Given the likelihood of greater access to health care among White patients in general, greater diagnostic uncertainty among Black defendants may have resulted in more attention to their clinical condition in this setting. Reasons for clinician referral can easily be investigated with a future questionnaire.

Strengths and Limitations

The primary strength of this study is its examination of multiple socioeconomic, clinical, and forensic variables. Chosen following literature review and discussion with epidemiologists who explore racial influences in public health, variables were gathered from the entirety of each defendant's hospitalization. Pretrial studies often include variables from discharge alone, so that snapshots pervade the forensic literature. Moreover, examining variables determined by the legal system before and after hospitalization (i.e.,

charges, findings of competence or incompetence, disposition) reminds practitioners and policymakers that treaters, evaluators, and hospitals do not function in isolation.

Access to a predecessor study specifically exploring inpatient competence restoration allowed a power analysis that was directly applicable to the population being examined. The defendants in the current study can be considered a robust representation of pretrial inpatient defendants in the jurisdiction.

Because of the far-reaching and complex nature of racism, all factors that may have affected defendant outcomes could not be included. These include, among others, childhood trauma, access to food and community supports, family structure, quality of education, and neighborhood crime and arrest rates. Indeed, as the American Medical Association points out, race is more likely a proxy for social influences and one's experience of racism; it is that experience that can be used alongside social determinants to explain risk factors for disease.⁴⁹ In forensics, unpacking more specific factors like trauma and community characteristics may consequently advance the discussion of which distinct structural influences determine forensic outcomes.

As with all studies conducted at a single institution, results may not be applicable elsewhere because of differences in hospital policy, local law, individual treatment providers, or available resources. From a practical standpoint, data gathered from chart and database review rely on the validity and accuracy of those entering the data. Investigators reviewed and discussed multiple documents in each chart to minimize this potential source of bias. Finally, despite the power analysis, a larger sample may nonetheless uncover more significant findings.

Conclusion

Beyond its specific findings on the difficulties disentangling race from SES, this investigation offers support for methods institutions can use to evaluate their own forensic outcomes. This view of organizational self-reflection applies more sophisticated statistical analysis (namely, regression over correlation), examines outcomes across the entire forensic interaction, and expands the factors usually tied to racial differences. Different jurisdictions may choose to explore the variables of particular interest to their communities, from food deserts, transportation gaps, and police violence to the availability of substance use or intimate

partner abuse services. On a larger scale, organizations may track the experiences of their beneficiaries across systems and recognize the impact of inter-agency coordination. These variables are among the areas where review may be tailored to the community to overcome any difficulties in identifying racial influences.

Such inquiries can be considered extensions of groundbreaking work by Parker,⁵⁰ who systematically examined the racial bias in 719 of his own evaluations. Likewise, Gowensmith and colleagues⁵¹ created an iPhone app that explored racial and other biases in 831 evaluations by 35 examiners in the United States and Canada. Moving these kinds of assessments into systems and organizations provides a logical next step. Expanding this review of racial outcomes beyond inpatient evaluation and restoration in an urban setting can bolster the confidence communities have in their forensic systems and acknowledge the need for greater attention to the mental health needs of marginalized persons interacting with the legal system.

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References

- Hardeman RR, Medina EM, Kozhimannil KB. Dismantling structural racism, supporting Black lives and achieving health equity: Our role. *N Engl J Med*. 2016 Dec; 375(22):2113–5
- Thomas TE, Lane SD, Elkhatib RM, *et al*. Race, history of abuse, and homelessness are associated with forced medication administration during psychiatric inpatient care. *J Psychiatr Pract*. 2020 Jul; 26(4):294–304
- Coleman KJ, Stewart C, Waitzfelder BE, *et al*. Racial-ethnic differences in psychiatric diagnoses and treatment across 11 health care systems in the Mental Health Research Network. *Psychiatr Serv*. 2016 Jul; 67(7):749–57
- Barnes A. Race and hospital diagnoses of schizophrenia and mood disorders. *Soc Work*. 2008 Jan; 53(1):77–83
- Hicks JW. Ethnicity, race, and forensic psychiatry: Are we color-blind? *J Am Acad Psychiatry Law*. 2004 Mar; 32(1):21–33
- Denzel AD, van Esch AY, Harte JM, Scherder EJ. Ethnic variations in psychotic disorders in the criminal justice system: A systematic review. *Aggress Violent Behav*. 2016 Jul; 29:20–9
- Perry BL, Neltner M, Allen T. A paradox of bias: Racial differences in forensic psychiatric diagnosis and determinations of criminal responsibility. *Race Soc Probl*. 2013 Jun; 5(4):239–49
- Salem A, Kushnier A, Dorio N, Reeves R. Nonemergency involuntary antipsychotic medication in prison: Effects on prison inpatient days and disciplinary charges. *J Am Acad Psychiatry Law*. 2015 Jun; 43(2):159–64
- Pedersen ML, Gildberg F, Baker J, *et al*. Ethnic disparities in the use of restrictive practices in adult mental health inpatient settings: A scoping review. *Soc Psychiatry Psychiatr Epidemiol*. 2023 Apr; 58(4):505–22
- Griffith EE. Ethics in forensic psychiatry: A cultural response to Stone and Appelbaum. *J Am Acad Psychiatry Law*. 1998 Jun; 26(2):171–84
- Martinez R, Candilis P. Ethics in the time of injustice. *J Am Acad Psychiatry Law*. 2020 Dec; 48(4):428–30
- Cerny-Suelzer CA, Friedman SH. Be woke, choose growth. *J Am Acad Psychiatry Law*. 2022 Mar; 50(1):8–12
- Adebimpe VR. Race, racism, and epidemiological surveys. *Hosp Community Psychiatry*. 1994 Jan; 45(1):27–31
- Mossman D. Predicting restorability of incompetent criminal defendants. *J Am Acad Psychiatry Law*. 2007 Mar; 35(1):34–43
- Morris DR, Parker GF. *Jackson's* Indiana: State hospital competence restoration in Indiana. *J Am Acad Psychiatry Law*. 2008 Dec; 36(4):522–33
- Bryant BE, Jordan A, Clark US. Race as a social construct in psychiatry research and practice. *JAMA Psychiatry*. 2022 Feb; 79(2):93–4
- Massey D. Residential segregation is the linchpin of racial stratification. *City Community*. 2016; 15(1):4–7
- Nuru-Jeter AM, Michaels EK, Thomas MD, *et al*. Relative roles of race versus socioeconomic position in studies of health inequalities: A matter of interpretation. *Annu Rev Public Health*. 2018; 39:169–88
- LaVeist TA. Disentangling race and socioeconomic status: A key to understanding health inequalities. *J Urban Health*. 2005 Jun; 82(2 Suppl 3):iii26–iii34
- Candipan J, Phillips NE, Sampson RJ, Small M. From residence to movement: The nature of racial segregation in everyday urban mobility. *Urban Studies*. 2021; 58(15):3095–117
- Grekin PM, Jemelka R, Trupin EW. Racial differences in the criminalization of the mentally ill. *Bull Am Acad Psychiatry Law*. 1994; 22(3):411–20
- Dvoskin J, Knoll J, Silva M. A brief history of the criminalization of mental illness. *CNS Spectr*. 2020; 25(5):638–50
- Murrie DC, Gardner BO, Torres AN. Competency to stand trial evaluations: A state-wide review of court-ordered reports. *Behav Sci & L*. 2020 Jan; 38(1):32–50
- Secarea CM, Cleary SD, Candilis PJ. Factors influencing adjudicative competence and length of time to restoration. *J Forensic Sci*. 2021 May; 66(3):982–91
- U.S. Department of Justice, Bureau of Justice Statistics. Measuring Socioeconomic Status in the NCVS: Background, Options, and Recommendations [Internet]; 2014 Jan 6. Available from: https://bjs.ojp.gov/sites/g/files/xyckuh236/files/media/document/measuring_ses-paper_authorship_corrected.pdf. Accessed January 12, 2023
- Greenberg GA, Rosenheck RA. Jail incarceration, homelessness, and mental health: A national study. *Psychiatr Serv*. 2008 Feb; 59(2):170–7
- Trestman RL. Is justice really blind? Nondominant groups in the American justice system. *J Am Acad Psychiatry Law*. 2018 Dec; 46(4):416–8
- Department of Corrections. DC Department of Corrections Facts and Figures October 2022 [Internet]; 2022 Oct. Available from: <https://doc.dc.gov/sites/default/files/dc/sites/doc/publication/attachments/DC%20Department%20of%20Corrections%20Facts%20and%20Figures%20October%202022.pdf>. Accessed January 11, 2023
- Washington DC Office of Planning. Table 1. Annual Estimates of the Resident Population by Sex Race and Hispanic Origin April 1 2010 to July 1 2019 [Internet]; 2020 Jun. Available from: <https://planning.dc.gov/node/1504656>. Accessed January 11, 2023
- Metropolitan Police Department, Washington, DC MPD Adult Arrests (2013-2021) [Internet]; 2023. Available from: <https://mpdc.dc.gov/publication/mpd-adult-arrests-2013-2021>. Accessed April 12, 2023

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31. Judd S, Parker GF. Court-ordered evaluations from a mental health court. *J Am Acad Psychiatry Law*. 2018 Mar; 46(1):52–62
32. Chow JC, Jaffee K, Snowden L. Racial/ethnic disparities in the use of mental health services in poverty areas. *Am J Public Health*. 2003 May; 93(5):792–7
33. Luccarelli J, Sacks CA, Snyderman C, *et al*. Coding for physical restraint status among hospitalized patients: A 2019 national inpatient sample analysis. *J Gen Intern Med*. 2023 Mar; 31:1–9
34. Alsan M, Garrick O, Graziani G. Does diversity matter for health? Experimental evidence from Oakland. *American Economic Review*. 2019; 109(12):4071–111
35. Schnitzer K, Merideth F, Macias-Konstantopoulos W, *et al*. Disparities in care: The role of race on the utilization of physical restraints in the emergency setting. *Acad Emerg Med*. 2020 Oct; 27(10):943–50
36. Cassie KM, Cassie W. Racial disparities in the use of physical restraints in U.S. nursing homes. *Health Soc Work*. 2013; 38(4):207–13
37. Kposowa AJ, Tsunokai GT, Butler EW. Effects of race and ethnicity on schizophrenia: Individual and neighborhood contexts. *Race, Gender, and Class*. 2002; 9(1):33
38. Rachlinski JJ, Johnson S, Wistrich AJ, Guthrie C. Does unconscious racial bias affect trial judges? *Notre Dame L Rev*. 2009; 84(3):1195–246
39. Cook TB, Reeves GM, Teufel J, Postolache TT. Persistence of racial disparities in prescription of first-generation antipsychotics in the USA. *Pharmacoepidemiol Drug Saf*. 2015 Nov; 24(11):1197–206
40. Diaz FJ, De Leon J. Excessive antipsychotic dosing in 2 U.S. state hospitals. *J Clin Psychiatry*. 2002 Nov; 63(11):998–1003
41. Walkup JT, McAlpine DD, Olfson M, *et al*. Patients with schizophrenia at risk for excessive antipsychotic dosing. *J Clin Psychiatry*. 2000 May; 61(5):344–8
42. Gudjonsson GH, Rabe-Hesketh S, Szukler G. Management of psychiatric in-patient violence: Patient ethnicity and use of medication, restraint and seclusion. *Br J Psychiatry*. 2004 Mar; 184:258–62
43. Pirelli G, Gottdiener WH, Zapf PA. A meta-analytic review of competency to stand trial research. *Psychol Pub Pol’y & L*. 2011; 17(1):1–53
44. Cooper VG, Zapf PA. Predictor variables in competency to stand trial decisions. *Law Hum Behav*. 2003; 27(4):423–36
45. Colwell LH, Giansini J. Demographic, criminogenic, and psychiatric factors that predict competency restoration. *J Am Acad Psychiatry Law*. 2011 Sep; 39(3):297–306
46. Dirks-Linhorst A, Linhorst DM, Loux TM. The role of race in court-ordered pretrial psychiatric evaluations. *J Ethnicity Crim Just*. 2018; 16(3):225–48
47. Pinals DA, Packer IK, Fisher W, Roy-Bujnowski K. Relationship between race and ethnicity and forensic clinical triage dispositions. *Psychiatr Serv*. 2004 Aug; 55(8):873–8
48. Monson CM, Gunnin DD, Fogel MH, Kyle LL. Stopping (or slowing) the revolving door: Factors related to NGRI acquittees’ maintenance of a conditional release. *Law & Hum Behav*. 2001 Jun; 25(3):257–67
49. American Medical Association. Racism is a threat to public health [Internet]. Available from: <https://www.ama-assn.org/delivering-care/health-equity/ama-racism-threat-public-health>. Accessed June 21, 2023
50. Parker G. Come see the bias inherent in the system! *J Am Acad Psychiatry Law*. 2016 Dec; 44(4):411–4
51. Gowensmith WN, McCallum K, Stout H. Using a mobile app to identify base rates and monitor bias in forensic evaluation. *J Forensic Psychol Res Pract* [Internet]; 2022 Jul. Available from <https://www.tandfonline.com/doi/full/10.1080/24732850.2022.2104146>