

Racial/Ethnic Differences in Drug- and Alcohol-Related Arrest Outcomes in a Southwest County From 2009 to 2018

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Objectives. To estimate the association between race/ethnicity and drug- and alcohol-related arrest outcomes.

Methods. We used multinomial logistic regression and general estimating equations to estimate the association between race/ethnicity and arrest outcomes in 36 073 drug- and alcohol-related arrests obtained from administrative records in a Southwest US county from 2009 to 2018. Results were stratified by charge type.

Results. Among misdemeanor drug- and alcohol-related arrests, American Indian/Alaska Native (AI/AN; adjusted odds ratio [AOR] = 3.60; 95% confidence interval [CI] = 3.32, 3.90), Latino (AOR = 1.53; 95% CI = 1.35, 1.73), and Black persons (AOR = 1.28; 95% CI = 1.05, 1.55) were more likely than White persons to be booked into jail as opposed to cited and released. AI/AN (AOR = 10.77; 95% CI = 9.40, 12.35), Latino (AOR = 2.63; 95% CI = 2.12, 3.28), and Black persons (AOR = 1.84; 95% CI = 1.19, 2.84) also were more likely than White persons to be convicted and serve time for their misdemeanor charges. Results were similar for felony drug- and alcohol-related arrests aggregated and stratified.

Conclusions. Our results suggest that race/ethnicity is associated with outcomes in drug-related arrests and that overrepresentation of racial/ethnic minorities in the criminal justice system cannot be attributed to greater use of drugs and alcohol in general. (*Am J Public Health.* 2020;110:S85–S92. doi:10.2105/AJPH.2019.305409)

More than 60% of criminal justice-involved individuals are racial/ethnic minorities, even though these groups make up just 30% of the US population.^{1,2} Black, Latino, and American Indian/Alaska Native (AI/AN) persons are more likely to be incarcerated compared with White persons,^{1–3} and police interactions among racial/ethnic minorities are more likely to result in arrest, even after accounting for arrest decision-making by police.⁴

Of more than 10.5 million arrests made across the United States in 2017, 15% were drug-related, and 9% involved driving while intoxicated with alcohol.⁵ The War on Drugs has been credited with creating policies that significantly contribute to racial/ethnic and socioeconomic disparities in drug arrests,⁶ further embedding racial/ethnic disparities within the criminal justice system. Racial/ethnic minorities continue to be more likely than

White individuals to be incarcerated for nonviolent substance-related offenses^{7,8} and imprisoned for drug charges.⁹ With regard to alcohol, racial/ethnic minorities are more likely to experience negative consequences, such as arrest and detention for drinking, potentially because of perceived racial discrimination and racial/ethnic stigma.¹⁰ The Southwest United States, for example, has a long history of overrepresentation of AI/AN

persons in the justice system² specifically for alcohol-related offenses,¹¹ yet AI/AN people in the Southwest have higher alcohol abstinence rates than in the general population.¹² Importantly, inherent bias toward AI/AN persons by law enforcement has been reported in towns that are in close proximity to tribal nations (i.e., border towns),¹³ presumably a more common occurrence than on tribal lands or in non-border towns. However, research on criminal justice outcomes among AI/AN individuals is limited.

Although it is clear that racial/ethnic minorities are overrepresented in the criminal justice system, it is less clear how outcomes at different points of interactions with the criminal justice system, including entry into the system, prosecution and pretrial services, adjudication, sentencing and sanctions, and corrections,¹⁴ differ by race/ethnicity, specifically for drug- and alcohol-related offenses. Thus, we aimed to estimate the association between race/ethnicity and arrest outcomes among individuals arrested for drug- or alcohol-related reasons in a rural Southwest US county (the county) from 2009 to 2018.

METHODS

We used administrative arrest records from the county that tracked information about individuals from arrest to disposition (the final status of an arrest). We created a retrospective

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cohort of individuals, according to their arrests and criminal charges (formal accusations asserting that somebody committed a crime) from January 1, 2009, through May 31, 2018 (Figure A, available as a supplement to the online version of this article at <http://www.ajph.org>). We excluded duplicated charges (administrative errors); charges with missing arrest dates, birthdates, and sex; charges with arrest dates before January 1, 2009, or after May 31, 2018; arrests among individuals younger than 18 years; and non-drug- and alcohol-related charges.

Drug- and alcohol-related arrests encompass all arrests involving drugs or alcohol as the primary reason for the charge (e.g., possession of marijuana, drunk and disorderly). Two team members independently reviewed arrest descriptions to identify drug- and alcohol-related charges and then shared their lists. If discrepancies were found, team members discussed their rationale and, through consensus, agreed on a final list of charges.

Race/ethnicity was obtained from arrest records at an individual's first-observed arrest and categorized as AI/AN, Latino/Latina, Black, White, and other/unknown. Among AI/AN persons, tribal affiliation was not included. If race/ethnicity was missing at the first-observed arrest and an individual had more than 1 arrest with completed data fields, information from subsequent arrests was used. Those categorized as "other/unknown" were not included in analyses ($n = 1286$). Although a large proportion of the population identify as more than 1 race, arrest records were limited to an individual's primary race and ethnicity.

Arrest types are defined in Table A (available as a supplement to the online version of this article at <http://www.ajph.org>). Arrest type was categorized as cited and released at time of interaction with law enforcement (cited and released), arrested by establishing probable cause (on-view arrest), and fully booked into the custody of the county jail (booked into the county jail).

Reports of disposition, the final status of a criminal arrest, are defined in Table A. Disposition was categorized as cited and released, no charges filed following arrest, booked into the county jail and released (booked and released), released from the county jail on bond (bond), or convicted and served time for a crime in a correctional facility (convicted and served time).

Demographic information on age and sex was obtained from arrest records. Age was calculated using date of birth and categorized (18–24, 25–34, 35–44, 45–54, and ≥ 55 years). Older adults were categorized as 55 years or older based on previous research about accelerated aging among incarcerated individuals.¹⁵ Sex was categorized as male or female.

Charge type was categorized as a felony, misdemeanor, or summons (an order to appear before a judge or magistrate) and described in Table A. In the county, summons are included in arrest records and categorized separately. Because someone may have multiple charges during an arrest, we categorized the arrest as a felony if an individual had at least 1 felony charge during the arrest. Because our analyses were performed on the arrest level, we calculated the number of previous arrests at the time of each arrest. If an individual was arrested only once or it was a first-observed arrest, the number of previous arrests was zero.

Demographic and arrest characteristics were presented as counts and percentages or mean and SD. We used multinomial logistic regression to estimate adjusted odds ratios (AORs) and 95% confidence intervals (CIs) for the associations between race/ethnicity with arrest type and disposition. The multinomial logistic regression models for the association between race/ethnicity (referent = White) and arrest type estimated the likelihood of an on-view arrest or being booked into the county jail versus being cited and released (referent). The multinomial logistic regression models for the association between race/ethnicity and disposition estimated the likelihood of no charges filed following arrest, being booked and released, bonding out, or being convicted and served time versus being cited and released (referent). We used generalized estimating equations to take clustering into account at the individual-person level by using a unique personal identification number assigned by the detention facility at first intake and continued for each subsequent incarceration. Because drug and alcohol use rates differ among racial/ethnic groups, we present separate models for drug- and alcohol-related arrests, drug arrests, and alcohol arrests. Models were stratified by charge type (felony, misdemeanor, or summons) and adjusted for age, sex, and number of previous arrests. Models assessing

associations among alcohol-related arrests were not stratified by charge type because of small sample sizes and were further adjusted for charge type. Models assessing the association between race/ethnicity and disposition also were controlled for arrest type.

All analyses were completed with SAS version 9.4 (SAS Institute, Cary, NC).

RESULTS

Our study population included 24 467 individuals who were arrested 36 073 times between January 1, 2009, and May 31, 2018 (Table 1). Those arrests resulted in 62 756 drug- or alcohol-related reasons for arrest. Alcohol-related charges ($n = 16\,781$) accounted for more arrests than drug-related charges ($n = 8111$). Individuals with drug- and alcohol-related arrests on average were aged 30.3 years ± 12.0 , and 74% were male. Among all arrested for drug- and alcohol-related charges, 35% were AI/AN, 9% were Latino/Latina, 4% were Black, and 51% were White. Compared with drug-related arrests, a higher proportion of those arrested for alcohol-related offenses were AI/AN (24% vs 40%), and a lower proportion were Latino/Latina (12% vs 8%), Black (6% vs 2%), and White (57% vs 49%).

Among drug- and alcohol-related arrests, AI/AN, Latino/Latina, and Black individuals were booked into the county jail more often than White individuals (Table 2), and this increased over the study period for all racial/ethnic groups (Figure B, available as a supplement to the online version of this article at <http://www.ajph.org>). For disposition of arrest, AI/AN, Latino/Latina, and Black persons were convicted more often and were more likely to serve time for a crime in a correctional facility, whether in the county jail or at the department of corrections (prison), than White persons (Table 2; Figure C, available as a supplement to the online version of this article at <http://www.ajph.org>). Felony arrests were lowest among AI/AN people compared with all other racial/ethnic groups. The mean number of previous arrests differed by race/ethnicity and was higher for arrests among AI/AN (4.4 ± 8.1), Latino/Latina (2.1 ± 5.3), and Black (1.6 ± 3.8) persons compared with White persons (0.9 ± 2.5). Results were similar for drug- and

TABLE 1—Demographic Characteristics of Individuals Arrested in a Southwest US County for Drug- and Alcohol-Related Charges: 2009–2018

Demographic Characteristic	Drug- and Alcohol-Related Arrests (n = 24 467), Mean \pm SD or No. (%)	Drug-Related Arrests ^a (n = 8111), Mean \pm SD or No. (%)	Alcohol-Related Arrests ^a (n = 16 781), Mean \pm SD or No. (%)
Age, y ^b	30.3 \pm 12.0	29.2 \pm 10.9	30.9 \pm 12.5
18–24	11 428 (46.7)	3 843 (47.4)	7 715 (46.0)
25–34	5 900 (24.1)	2 294 (28.3)	3 739 (22.3)
35–44	3 580 (14.6)	1 078 (13.3)	2 574 (15.3)
45–54	2 366 (9.7)	607 (7.5)	1 812 (10.8)
\geq 55	1 193 (4.9)	289 (3.6)	941 (5.6)
Sex			
Male	18 060 (73.8)	6 274 (77.4)	12 107 (72.1)
Female	6 407 (26.2)	1 837 (22.6)	4 674 (27.9)
Race/ethnicity			
American Indian/Alaska Native	8 434 (34.5)	1 944 (24.0)	6 659 (39.7)
Latino/Latina	2 304 (9.4)	933 (11.5)	1 401 (8.3)
Black	879 (3.6)	516 (6.4)	379 (2.3)
White	12 586 (51.4)	4 612 (56.9)	8 179 (48.7)
Other/Unknown	264 (1.1)	106 (1.3)	163 (1.0)

^aNot mutually exclusive.

^bAge at first observed incarceration.

alcohol-related arrests separately (Table B, available as a supplement to the online version of this article at <http://www.ajph.org>).

Race/Ethnicity and Arrest Type

The multinomial logistic regression models estimated the likelihood of an on-view arrest or being booked into the county jail versus being cited and released at time of arrest (referent; Table 3). Among misdemeanor drug- and alcohol-related arrests, AI/AN (AOR = 3.60; 95% CI = 3.32, 3.90), Latino/Latina (AOR = 1.53; 95% CI = 1.35, 1.73), and Black (AOR = 1.28; 95% CI = 1.05, 1.55) individuals were more likely than White individuals to be booked into the county jail at the time of arrest. Similarly, among felony drug- and alcohol-related arrests, AI/AN (AOR = 1.67; 95% CI = 1.11, 2.25) and Latino/Latina (AOR = 1.65; 95% CI = 1.08, 2.54) were more likely than White persons to be booked into the county jail. Results were similar for those who were summoned (vs misdemeanor or felony) and for drug- and alcohol-related arrests, separately. AI/AN, Latino/Latina, and Black persons were also more likely to have an on-view arrest compared with White persons.

Race/Ethnicity and Disposition of Arrest

The multinomial logistic regression models estimated the likelihood of no charges filed following arrest, being booked and released, bond, pending trial, or being convicted and served time versus being cited and released (referent; Table 4). Among misdemeanor drug- and alcohol-related arrests, AI/AN (AOR = 10.77; 95% CI = 9.40, 12.35), Latino/Latina (AOR = 2.63; 95% CI = 2.12, 3.28), and Black (AOR = 1.84; 95% CI = 1.19, 2.84) persons were more likely than White persons to serve time for their charges. Among felony drug- and alcohol-related arrests, Latino/Latina individuals (AOR = 2.76; 95% CI = 1.67, 4.57) were more likely than White individuals to serve time for their charges. Drug- and alcohol-related arrests were not statistically significant for AI/AN or Black groups, potentially because of small sample size. Results were similar for those who were summoned and by drug- and alcohol-related arrests separately. AI/AN, Latino/Latina, and Black persons also were more likely to have no charges filed by the district attorney following an arrest or to be booked and released compared with White persons for all drug- and alcohol-related arrests as well as

for drug- and alcohol-related arrests separately. Following a unique pattern, among felony drug arrests, AI/AN persons were less likely to be released on bond compared with White persons (AOR = 0.60; 95% CI = 0.36, 0.98).

DISCUSSION

As a result of historical and contemporary social, political, and economic factors, racial/ethnic disparities in arrest outcomes persist.¹ Our findings indicate substantial racial/ethnic disparities in arrest outcomes for drug- and alcohol-related crimes in a Southwest county over a 10-year period. AI/AN, Black, and Latino/Latina persons were more likely to be booked into the jail (compared with cited and released) on arrest and sentenced to serve time in the correctional system for their crimes, compared with White persons. Our findings of disparities in outcomes by race/ethnicity indicated potential explanations and implications at different stages of interactions with the criminal justice system, including arrest (entry into the system), prosecution and pretrial services, and adjudication and sentencing.¹⁴

Previous research examining racial disparities in drug distribution arrests found that Black adults were more likely to experience a drug distribution arrest, regardless of offending and neighborhood context, compared with White adults.¹⁶ In addition to the rate of offenses, interactions and outcomes with law enforcement differ by race/ethnicity. Police interactions among racial/ethnic minorities are more likely to result in arrest compared with White individuals, even after accounting for several competing factors related to arrest decision-making by police.⁴ Although degrees of magnitude for ORs differed, we found that AI/AN, Black, and Latino/Latina persons were more likely to have an on-view arrest or to be booked into the county jail compared with White persons.

Racial/ethnic minorities may be more likely to sell or use alcohol or drugs in public and semipublic locations, sell illicit substances to strangers, and engage in these practices more frequently than do White individuals.¹⁷ For example, AI/AN people may travel from dry reservations surrounding the county, where the sale of alcoholic beverages is illegal, to areas bordering the reservation that are often more policed to obtain and consume

TABLE 2—Characteristics of Arrests in a Southwest US County for Drug- and Alcohol-Related Charges: 2009–2018

Incarceration Characteristics	Drug- and Alcohol-Related Arrests			
	White (n = 31 455), No. (%) or Mean ±SD	Black (n = 1189), No. (%) or Mean ±SD	Latino/Latina (n = 3295), No. (%) or Mean ±SD	American Indian/Alaska Native (n = 15 375), No. (%) or Mean ±SD
Charge type				
Felony	2 348 (7.5)	309 (26.0)	738 (22.4)	1 070 (7.0)
Misdemeanor	10 738 (34.1)	580 (48.8)	1 975 (60.2)	11 850 (77.2)
Summons	2 777 (8.8)	298 (25.1)	570 (17.4)	2 423 (15.8)
Missing	54	2	12	32
Arrest type				
Cite and release	5 242 (16.7)	482 (23.8)	1 529 (21.3)	1 503 (9.8)
On-view arrest	2 009 (6.4)	990 (16.0)	3 643 (13.1)	3 362 (21.9)
Booked into the county jail	8 598 (27.3)	780 (60.2)	2 362 (65.6)	10 499 (68.3)
Missing	68	6	14	8
Disposition				
Cited and released ^a	3 791 (12.1)	183 (15.5)	619 (18.9)	1 466 (9.6)
No charges filed following arrest ^b	547 (1.7)	89 (7.5)	180 (5.5)	649 (4.2)
Booked and released ^c	5 222 (16.6)	378 (31.9)	1 044 (31.9)	6 539 (42.7)
Bond ^d	1 692 (5.4)	139 (11.7)	349 (10.7)	1 309 (8.5)
Pending ^e	3 667 (11.7)	278 (22.5)	591 (18.1)	1 819 (11.9)
Convicted and served time ^f	930 (5.9)	117 (9.9)	489 (14.9)	3 551 (23.2)
Missing	68	5	23	42
Previously arrested,% yes	4 836 (30.4)	438 (36.8)	1 408 (42.7)	9 449 (61.5)
No. of previous arrests ^g	0.9 ±2.5	1.6 ±3.8	2.1 ±5.3	4.4 ±8.1

Note. The sample size was 36 073 arrests among 24 467 individuals.

^aIncludes cite and release and print and mug.

^bNo complaint filed.

^cIncludes released on recognizance, court-ordered release, and third-party release.

^dIncludes bail bond, secure bond, and unsecure bond

^eIncludes pending court appearance, pending adjudication, pending sentencing, and felony complaint arrest (not included in final models).

^fIncludes time served, convicted and served time, department of corrections, court commit, released to other agency (e.g., Immigration and Customs Enforcement), released forthwith, pending transportation, and prisoner in transit.

^gIncludes all previous arrests.

alcohol.¹⁸ However, AI/AN populations and tribal policies in the US are heterogeneous, and the possession and consumption of alcohol are permitted in some tribal nations but not others. These high-risk practices may lead racial/ethnic minorities to be arrested and incarcerated more often and may motivate police to concentrate efforts in minority neighborhoods¹⁹ and thus lead to higher probabilities of arrest. Conversely, current movements toward higher policing of minor crimes, such as public drinking, specifically in communities of color, could possibly create community disorganization, which may lead to increased illegal activity.²⁰ Consequently,

location may play a role in high-risk substance using and selling behavior. These explanations could support that those with more criminal justice involvement may have stricter outcomes from their arrests because of the existence of a criminal record. Although we do not have specific details such as the neighborhood where the crime was committed, we found that a higher proportion of AI/AN, Latino/Latina, and Black people were previously arrested compared with White people. However, we cannot control for all criminal behaviors, a limitation of administrative records. Therefore, the explanation that minority populations are more

likely to engage in high-risk substance using and selling behavior may not completely explain our findings.

Additionally, in the Southwest United States, anti-immigration policies have negatively affected Latino/Latina people. These federal and state policies subject communities to the saturation of and pervasive encounters with immigration officials, including local police enacting immigration enforcement.²¹ In 2010, Arizona passed the Arizona Senate Bill 1070 (SB1070), granting federal immigration law enforcement capabilities to local law enforcement to request proof of citizenship and immigration status from anyone suspected of being in the country unlawfully and legalized ethn racial profiling and criminalization of Latino/Latina immigrants and nonimmigrants.²² Although SB1070 is no longer in effect, long-standing interest in racial/ethnic profiling in policing in not only Arizona but also the Southwest may be a source of disparities in arrest outcomes.

White persons were more likely than Black persons to be released pending trial,²³ and Hispanic persons were less likely to receive a nonfinancial release option (release on recognizance) compared with White persons.²⁴ Similarly, we found that AI/AN, Black, and Latino/Latina individuals were more likely to be released after being booked into the county jail and charged (vs cited and released) compared with White individuals. AI/AN, Black, and Latino/Latina persons also were more likely to be released on bond (vs cited and released) compared with White persons. However, for felony drug-related arrests, AI/AN persons were less likely to be released on bond (vs cited and released) compared with all other racial/ethnic groups. Previous studies found a notable racial disparity during the decision to deny bail or to grant bail that individuals may not be able to afford.²⁵ Compared with White individuals, a larger proportion of Black and Hispanic individuals were denied bail or held on bail versus a nonfinancial release option.²⁴ After the authors controlled for bail amount, Black and Hispanic persons were significantly less able to post bail. Among individuals required to pay bail, the odds of detention for Black and Hispanic individuals were more than twice those for White individuals.²⁴ We could not differentiate whether someone was denied bail or could not post bond or

TABLE 3—Association Between Race/Ethnicity and Arrest Type Among Individuals With Drug- and Alcohol-Related Charges in a Southwest US County, by Charge Type: 2009–2018

Charge Type and Race ^b	Arrest Type ^a	
	On-View Arrest, AOR (95% CI)	Booked Into the County Jail, AOR (95% CI)
All drug- and alcohol-related arrests		
Felony		
White (Ref)	1	1
Black	1.47 (0.79, 2.76)	1.12 (0.61, 2.04)
Latino/Latina	1.40 (0.88, 2.22)	1.65 (1.08, 2.54)
American Indian/Alaska Native	2.32 (1.51, 3.56)	1.67 (1.11, 2.25)
Misdemeanor		
White (Ref)	1	1
Black	1.21 (0.88, 1.67)	1.28 (1.05, 1.55)
Latino/Latina	1.37 (1.14, 1.64)	1.53 (1.35, 1.73)
American Indian/Alaska Native	6.81 (6.09, 7.61)	3.60 (3.32, 3.90)
Summons		
White (Ref)	1	1
Black	1.41 (0.97, 2.04)	1.35 (1.01, 1.80)
Latino/Latina	1.85 (1.36, 2.52)	2.05 (1.61, 2.61)
American Indian/Alaska Native	6.74 (5.41, 8.38)	4.44 (3.67, 5.38)
Drug-related arrests		
Felony		
White (Ref)	1	1
Black	1.52 (0.81, 2.85)	1.12 (0.62, 2.05)
Latino/Latina	1.38 (0.87, 2.20)	1.62 (1.05, 2.49)
American Indian/Alaska Native	1.83 (1.18, 2.85)	1.32 (0.87, 2.01)
Misdemeanor		
White (Ref)	1	1
Black	0.91 (0.48, 1.69)	1.11 (0.74, 1.66)
Latino/Latina	0.59 (0.36, 0.97)	1.16 (0.87, 1.56)
American Indian/Alaska Native	4.39 (3.40, 5.68)	2.33 (1.89, 2.88)
Summons		
White (Ref)	1	1
Black	1.64 (1.11, 2.42)	1.62 (1.19, 2.21)
Latino/Latina	1.77 (1.25, 2.52)	1.74 (1.32, 2.30)
American Indian/Alaska Native	4.76 (3.68, 6.17)	3.41 (2.74, 4.23)
Alcohol-related arrests		
Felony, misdemeanor, and summons^c		
White (Ref)	1	1
Black	1.16 (0.82, 1.65)	1.30 (1.05, 1.61)
Latino/Latina	1.49 (1.24, 1.79)	1.64 (1.44, 1.86)
American Indian/Alaska Native	7.29 (6.51, 8.16)	3.93 (3.61, 4.28)

Note. AOR = adjusted odds ratio; CI = confidence interval. General estimating equation multinomial logistic regression models account for clustering on the individual (person) level and are adjusted for age, sex, and number of previous incarcerations. The sample size was 36 073 arrests among 24 467 individuals.

^aThe reference group for arrest type is cited and released.

^bThe reference group for race/ethnicity/charge type is non-Hispanic White.

^cBecause of small sample size of felony alcohol-related arrests, felony and misdemeanor alcohol-related arrests were combined, and models were adjusted for charge type.

determine the bail amount and were unable to control for socioeconomic status and thus could not determine whether AI/AN individuals were less likely than other racial/ethnic groups to be released on bond, independent of socioeconomic status. Future work should explore the associations presented in this study and determine how socioeconomic status may affect results.

At the adjudication and sentencing stage, an estimated 33% of Black men and 17% of Latino men serve time in prison during their lifetimes compared with 6% of White men.¹ Black women, AI/AN women, and Latina women are also disproportionately likely to be incarcerated compared with White women.^{1,3} Similar to national statistics, we found that AI/AN, Black, and Latino/Latina persons were more likely to be convicted and sentenced for a crime compared with White persons. White individuals were more likely than their Black counterparts to be offered alternatives to incarceration such as drug and alcohol courts or other community-based diversionary programs.⁷ This may account for the fact that White persons are less likely than Black, Latino/Latina, and AI/AN persons to serve time in a correctional setting for their drug- or alcohol-related crime.

One potential explanation for racial/ethnic disparities in arrest outcomes for drug- and alcohol-related crimes points to systems that affect an individual before any interactions with the criminal justice system. Systematic oppression, including historical trauma, of racial/ethnic minorities in the United States may result in substance use as a coping mechanism; higher substance use leads to higher rates of arrest for drug- and alcohol-related crimes. Among AI/AN people, the legacy of colonization and federal assimilation policies continues to affect lives.^{26,27} Similarly, previous research has indicated that Black adults have sustained traumatic psychological and emotional injury as a direct result of slavery, perpetuated by social and institutional inequality, racism, and oppression, which also includes disparities in the criminal justice system.²⁸ Trauma and preconceived stereotypes might contribute mechanistically to our findings through unconscious or conscious interpersonal and structural biases in the criminal justice system and influence racial/ethnic disparities in all stages of the criminal justice system.

TABLE 4—Association Between Race/Ethnicity and Disposition Among Individuals in a Southwest US County With Drug- and Alcohol-Related Charges, by Charge Type: 2009–2018

Race/Ethnicity ^b	Disposition ^a			
	No Charges Filed Following Arrest, AOR (95% CI)	Booked and Released, AOR (95% CI)	Bond, AOR (95% CI)	Convicted and Served Time, AOR (95% CI)
All drug- and alcohol-related arrests				
Felony				
White (Ref)	1	1	1	1
Black	1.59 (0.74, 3.42)	1.17 (0.57, 2.42)	1.55 (0.73, 3.28)	1.67 (0.79, 3.52)
Latino/Latina	1.79 (1.06, 3.02)	1.02 (0.62, 1.67)	1.17 (0.68, 1.98)	2.76 (1.67, 4.57)
American Indian/Alaska Native	1.63 (1.04, 2.56)	1.22 (0.80, 1.86)	0.60 (0.36, 0.98)	1.40 (0.89, 2.19)
Misdemeanor				
White (Ref)	1	1	1	1
Black	2.80 (1.57, 5.00)	1.30 (1.03, 1.63)	1.16 (0.82, 1.64)	1.84 (1.19, 2.84)
Latino/Latina	1.48 (1.00, 2.18)	1.07 (0.94, 1.23)	1.17 (0.98, 1.39)	2.63 (2.12, 3.28)
American Indian/Alaska Native	3.92 (3.09, 4.99)	3.20 (2.93, 3.48)	2.25 (1.99, 2.53)	10.77 (9.40, 12.35)
Summons				
White (Ref)	1	1	1	1
Black	2.52 (1.49, 4.24)	1.36 (0.93, 1.98)	1.49 (0.95, 2.34)	1.57 (0.90, 2.75)
Latino/Latina	1.84 (1.18, 2.86)	1.64 (1.22, 2.19)	1.39 (0.96, 1.99)	2.51 (1.69, 3.73)
American Indian/Alaska Native	4.60 (3.45, 6.14)	2.81 (2.27, 3.47)	2.15 (1.67, 2.77)	6.98 (5.33, 9.14)
Drug-related arrests				
Felony				
White (Ref)	1	1	1	1
Black	1.58 (0.73, 3.39)	1.22 (0.59, 2.53)	1.57 (0.74, 3.33)	1.68 (0.79, 3.55)
Latino/Latina	1.73 (1.03, 2.92)	0.98 (0.60, 1.62)	1.17 (0.68, 2.00)	2.77 (1.67, 4.59)
American Indian/Alaska Native	1.36 (0.86, 2.17)	0.92 (0.59, 1.43)	0.51 (0.30, 0.87)	1.27 (0.80, 2.02)
Misdemeanor				
White (Ref)	1	1	1	1
Black	0.63 (0.15, 2.75)	1.10 (0.69, 1.76)	0.77 (0.38, 1.57)	0.87 (0.42, 1.81)
Latino/Latina	0.91 (0.38, 2.15)	0.98 (0.71, 1.36)	0.71 (0.43, 1.17)	1.22 (0.76, 1.97)
American Indian/Alaska Native	1.64 (0.93, 2.89)	2.57 (2.05, 3.22)	2.01 (1.49, 2.70)	5.94 (4.44, 7.95)
Summons				
White (Ref)	1	1	1	1
Black	2.96 (1.60, 5.47)	1.62 (1.09, 2.42)	1.62 (1.00, 2.61)	1.82 (0.98, 3.35)
Latino/Latina	1.01 (0.50, 2.05)	1.58 (1.15, 2.18)	1.30 (0.86, 1.97)	1.94 (1.19, 3.18)
American Indian/Alaska Native	1.59 (0.98, 2.57)	2.49 (1.96, 3.17)	1.81 (1.34, 2.44)	6.86 (4.93, 9.56)
Alcohol-related arrests				
Felony, misdemeanor, and summons^c				
White (Ref)	1	1	1	1
Black	3.71 (2.23, 6.17)	1.34 (1.03, 1.74)	1.36 (0.95, 1.97)	2.01 (1.25, 3.21)
Latino/Latina	1.83 (1.33, 2.52)	1.08 (0.94, 1.25)	1.22 (1.02, 1.47)	2.90 (2.32, 3.63)
American Indian/Alaska Native	4.98 (4.05, 6.11)	3.19 (2.92, 3.48)	2.26 (2.00, 2.56)	10.84 (9.40, 12.51)

Note. AOR = adjusted odds ratio; CI = confidence interval. General estimating equation multinomial logistic regression models account for clustering on the individual (person) level and are adjusted for age, sex, number of previous incarcerations, and arrest type. The sample size was 36 073 arrests among 24 467 individuals.

^aThe reference group for arrest type is cited and released.

^bThe reference group for race/ethnicity/charge type is non-Hispanic White misdemeanor arrests.

^cBecause of small sample size of felony alcohol-related arrests, felony, misdemeanor, and summons alcohol-related arrests were combined, and models were adjusted for charge type.

Although we have observed these disparities in the county, the criminal justice system in the county is far from alone in experiencing these issues. Nationally, we have seen racial/ethnic disparities in arrest rates⁴ and outcomes.⁸ Policy and procedure reform to change severity of sentencing, such as eliminating mandatory minimums for drug offenses and the 3-strike laws, must become a priority at the federal level to mitigate the growth of the criminal justice-involved population and racial inequities in the criminal justice system.²⁹ Front-end alternatives to arrest, prosecution, and incarceration such as diversionary programs, drug and alcohol courts, and community-based treatment are successfully reducing the number of those incarcerated³⁰ and should be considered not only by court systems but also by city, state, and federal policymakers. Racial/ethnic minorities, however, are less likely than their White counterparts to be offered these alternatives.⁷ This may support our findings that AI/AN persons have more than 10 times the odds of being convicted and serving time for an alcohol-related arrest, and Black and Latino/Latina individuals have more than 2 times the odds of being convicted and serving time for a felony drug-related arrest compared with White persons.

Potential Solutions

Our results suggest that racial disparities exist throughout the criminal justice system. Substantial changes to improve equity in the criminal justice system must include explicit and intentional racial justice strategies such as instituting reforms to reduce concentrated overpolicing, identifying alternatives to pre-trial money bail, and implementing alternatives to incarceration (e.g., treatment services).³¹ These changes would require bipartisan, collective impact approaches on the local, state, and federal level in a group of systems that have historically operated independently of one another, perpetuating systematic biases while limiting their potential public health effect. Innovative policy and programmatic strategies at all levels of the US criminal justice system have emerged to address structural biases disproportionately affecting racial/ethnic minority populations.^{32,33}

A current step that the county has taken is establishing a multidisciplinary council to study the criminal justice systems in the county; identify areas for improvement; and formulate policy, plans, and programs for change. The formation of the council was the result of the increasing incarcerated population in the county jail and the recognition that without a coordinated and collaborative effort, punishment would take precedent over reform and rehabilitation. The county's council is a leading example in the United States of a countywide collaboration among county, municipal, and state criminal justice agencies (court systems, sheriff's offices, police, and probation); treatment providers; administrative departments; and concerned citizens to address issues and needs arising within the criminal justice system. The current research is a step toward characterizing the extent of the issue and beginning to address bias in arrest progression.

Public Health Implications

The growing criminal justice burden of drug- and alcohol-related crimes and related racial disparities may exacerbate the already established drug and alcohol public health crisis. This poses questions within the criminal justice system of how decisions are made concerning punishment of drug- and alcohol-related crimes. Punishing those with drug- or alcohol-related offenses historically has been seen as a crucial feature of the criminal justice system. On their faces, criminal laws and policies do not discriminate by punishing persons based on race/ethnicity differently. However, emerging research,^{1,2,4} along with our findings, indicates, in practice, that this may not be the case. Future work should consider the underlying factors that drive disparities in arrest outcomes for racial/ethnic minorities and work toward community and collaborative interventions that consider equal access to alternatives to incarceration to improve the burden of criminal justice involvement and mitigate the public health crisis. Additionally, future work should investigate the effects of current structural-level decriminalization and legalization of drug- and alcohol-related crimes and the shift from punishment to rehabilitation that may address racial inequities in the criminal justice system. **AJPH**

CONTRIBUTORS

R. Camplain and C. Camplain conceptualized the research question. R. Camplain also led quantitative analysis and took the lead on writing the article. C. Camplain also was the project coordinator and took a lead role in the writing of the article. R. T. Trotter II and J. A. Baldwin originated the study and served as Multiple Principal Investigators on the grant that funded the project. G. Pro assisted with analysis and with drafting and writing of the article. S. Sabo and E. Eaves assisted with the drafting and writing of the article. M. Peoples collaborated in the development of the article, served as the community partner, and assisted with the writing of the article. All authors read, edited, and approved the final version of the article.

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CONFLICTS OF INTEREST

The authors have no conflicts of interest to disclose.

HUMAN PARTICIPANT PROTECTION

Data were provided by the county's detention facility through a data use agreement with the Northern Arizona University. Northern Arizona University's institutional review board approved this study. Informed consent was not required, and personal identifiable information was removed.

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