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Criminalized or Medicalized? Examining the Role of Race in Responses to Drug Use

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ABSTRACT

Drug policy has shifted from intense criminalization toward reforms that prioritize decarceration and treatment. Despite this shift, little is known about whether support for recent treatment-oriented drug policy is equitable by users' race and the drug type. Using the opiate and crack cocaine crises as cases, we analyze 400 articles from the *New York Times* and *Washington Post* to assess the degree to which the two crises were racialized, criminalized, and medicalized. We find that media coverage medicalized and humanized White people who use opiates, while coverage of crack cocaine focused on criminalization, vilifying Black people who use drugs. We then conduct two vignette experiments (N=308; N=630) to examine whether these racialized frames shape public support for treatment or criminalization. We find the public more likely to support criminalization for Black people, while supporting drug treatment for White people. Respondents are more likely to support drug treatment for heroin use than for crack cocaine. Our findings suggest that support for medicalized approaches to drug use is more likely to occur for White people and drugs linked to White people, while Black people and drugs associated with Black people continue to be perceived as largely amenable to punitive options.

KEYWORDS: race and drug use; criminalization; medicalization; media; public opinion.

Within only three decades, criminal justice policy addressing drug use has shifted from "get tough" on crime laws towards decarceration and rehabilitation (Goodman, Page, and Phelps 2017). For example, the 1986 Anti-Drug Abuse Act created mandatory minimums, strengthened repeat offender laws, and established a 100-to-1 sentencing disparity between crack and powder cocaine possession. More recently, the Fair Sentencing Act lessened cocaine sentencing disparities, and the Comprehensive Addiction Recovery Act (CARA) prioritized drug treatment and prevention by increasing funding for prescription drug monitoring, research, and illicit drug task forces, and improving access to opioid antagonists. Mass media and public opinion shape policies in democratic countries (Baum and Potter 2008), which, in this case, implies a relatively quick shift in both media coverage and public opinion of criminal justice. We consider the role that media played in defining these two

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policy periods, the extent to which public opinion aligns with current treatment-oriented policies, and whether the legacy of the War on Drugs informs current opinion. We argue that race played a central role in how media framed each period and whether public opinion is congruent with current approaches to drug use.

Deviance often prompts two distinct reactions: criminalization or medicalization (Heitzeg 2015). Criminalizing deviance is historically accompanied by a moral panic to justify punishment and stigmatizes the actor (Russell 1998). Alternatively, medicalizing deviance provides opportunities for treatment and rehabilitation (Conrad 2007), reduces the chance of criminal stigmatization and provides opportunities to overcome the addict label (Avery and Avery 2019). Race affects responses to deviance, with Black people's actions largely criminalized and White people's deviance perceived as treatable (Peffley and Hurwitz 2010). Drug use is both a potential crime and health threat, making it well-suited for examination within media and public opinion.

Media coverage of drugs, which influences public opinion and policy (Baum and Potter 2008; Beckett 1997), has historically vilified racial and ethnic minorities (Murakawa 2014; Musto 1999). These portrayals help justify withholding resources and prompt public support for criminalizing substances linked to racial minorities (Cohen 1972; Musto 1999). However, privileged groups (e.g., White people) can control media narratives that define moral culpability for deviance (Becker 1963; Duxbury, Frizzell, and Lindsay 2018). Thus, racial bias in media coverage and public opinion of drug use has consequences for the types of policies implemented (Baum and Potter 2008; Brooks and Manza 2006).

Given both crises differ along racial lines, we use the 2000s–10s U.S. opiate and the 1980s–90s crack cocaine crises to (1) examine the thematic frames in media coverage, namely medicalization, criminalization, and racialization; and (2) analyze how race explicitly, and race implicitly through drug type, affects public support for criminal charges or drug treatment in response to drug use. We first use qualitative content analysis of articles covering both crises from the *New York Times* and *Washington Post* to establish the extent to which criminal and medical frames were employed in each period and how the racialized emergent theme of personal narratives worked to demean some and humanize others. Then, we conduct two vignette experiments. The first (N=308) manipulates the drug type (i.e., heroin and crack cocaine) to capture whether a drug's associated racial group implicitly shapes public opinion. The second (N=630) includes mugshots of Black and White men to test drug type and direct race effects.

We reveal how racially biased media coverage may continue to reify and construct public beliefs about which racial groups are deserving of drug treatment or criminalization. Findings indicate that criminal narratives are so inextricably linked to Black people that even amidst a treatment-oriented shift in drug policy, the public still elects to criminalize Black people who use drugs (Welch 2007). Results imply that current support for rehabilitative approaches to substance use is likely driven by whether a drug is predominantly impacting or associated with White people.

BACKGROUND

Cultural meanings are assigned to racial groups based on their social status, which then reproduce or reinforce inequalities that affect their life chances (Feagin 2010). White racial frames, occurring through stereotypes, ideologies, imagery, and discrimination, operate by attributing positive meanings to whiteness and emphasizing its perceived inherent superiority and morality. Such framing permeates social institutions, such as mass media, which disseminate positive White racial frames and negative racial minority frames (Feagin 2010; Reskin 2012). For instance, crime news coverage overrepresents Black people as criminals and underrepresents them as victims relative to rates of offending and victimization, and Black people are more likely to have their mugshots shown in news coverage compared to White people (Dixon, Azocar, and Casas 2003; Entman 1992).

Repeated exposure to racialized media frames shapes individuals' perceptions of racial and ethnic minorities and social problems such as crime (Beckett 1997). Media coverage that employs explicit or implicit racial frames triggers and reifies prejudicial beliefs, affecting public evaluations and responses to social problems (Erigha and Charles 2012; Mendelberg 2001; Scheufele and Tewksbury 2007). Peffley, Shields, and Williams (1996) find that White respondents holding negative stereotypes of Black people perceived Black suspects in media coverage of crime as guiltier, more deserving of punishment, and more prone to commit future violence than similar White suspects. Even including words that are implicitly associated with Black people and used in crime media coverage, such as "inner city" or "urban," influences public support for restrictive welfare and punitive crime policy (Gilens 1996; Peffley and Hurwitz 2010).

The public influences social policy in democratic societies because politicians must respond to their constituents' policy preferences to prevent electoral losses and other forms of public reprisal (Brooks and Manza 2006; Baum and Potter 2008). Yet, those in power also have considerable ability to manipulate media to sway public opinion (Becker 1963; Beckett 1997). In general, people advocate for criminalizing deviance when they perceive a behavior or a particular group poses a threat (Russell 1998), and support medicalizing deviance to provide opportunities for treatment and to protect people from criminal labels (Conrad 2007; Conrad and Schneider 2010). Race has historically shaped responses to deviance, with White people's deviant acts typically medicalized and Black people's deviant behavior criminalized (Heitzeg 2015).

Criminalizing Deviant Social Problems

Crime in the United States has been inextricably linked to racial minorities, especially Black people (Russell 1998; Welch 2007). The consequent criminal stigma affects all Black people, regardless of individual criminal histories (Alexander 2010). The mere presence of Black residents in certain neighborhoods is correlated with increased police force size and White people's fear of crime (Quillian and Pager 2001; Stults and Baumer 2007). Police disproportionately target Black communities for drug offenses (Chambliss 1994), and punitive policies predominantly affect poor racial minorities (Alexander 2010). Despite similar rates of drug use, Black people are more likely to be charged with drug possession than White people, and the Black-White disparity in drug arrests has actually widened from 3:1 to 5:1 since 1986 (Mitchell and Caudy 2015).

For substances associated with racial and ethnic minorities, historical examples demonstrate the relationship between media, public pressure, political advocacy, and implementation of punitive policy (Musto 1999). During industrialization, temperance movement leaders attributed alcohol consumption to Irish immigrants, whom they perceived as economic and criminal threats. As scapegoats for perceived moral dissipation, such framing contributed to the passage of the Prohibition Act of 1919, which criminalized alcohol use. Around the turn of the 20th century, Chinese immigrants brought the practice of smoking opium, sparking increases in anti-opium ordinances in areas with high Chinese immigrant concentrations. Simultaneously, southern reformers ignited public panic through unsupported claims of cocaine causing Black men to rape White women. Both opium and cocaine were criminalized by the passage of the Harrison Narcotics Act of 1914. Congress also outlawed marijuana use via the Marijuana Tax Act of 1937, despite little evidence that it was dangerous. The Federal Bureau of Narcotics enabled marijuana criminalization by saturating media with stories of Mexican immigrants using marijuana, rebellious children, and marijuana-induced rape.

Medicalizing Deviant Social Problems

Research demonstrates that medicalization results in preferable outcomes compared to criminalization because it attributes deviance to a treatable illness, partially absolving individuals of their actions (Heitzeg 2015). While addiction is undoubtedly also stigmatizing, by considering addiction a

treatable disease, stigma should recede in the long-term (Avery and Avery 2019). Medicalization also saves money, reduces addiction rates, and decreases crime rates (Zarkin et al. 2012). Apart from White minority ethnic groups in the past, White people have overwhelmingly received the benefit of medicalized approaches to deviance. Authority figures are more likely to diagnose White students with a treatable condition, such as ADHD, resulting in less punitive pathways to addressing student misconduct (Kim, Losen, and Hewitt 2010; Ramey 2015). Similarly, media are more likely to attribute White mass shooters' actions to mental illness than Black mass shooters (Duxbury et al. 2018). Attributing crime to mental illness facilitates portrayals of White people as sympathetic characters and depicts their criminal behavior as uncharacteristic, while Black and Latino people continue to be framed as inherently violent (Entman and Rojecki 2000).

For substance use, medicalized approaches provide pathways for those who use drugs to avoid criminalization and receive addiction services. Evidence suggests that these approaches benefit nonviolent people who use drugs. People referred to drug courts as alternatives to prison are less likely to relapse and re-offend (Evans et al. 2014; Mitchell et al. 2012). However, Black and Hispanic people remain less likely to be diverted into drug courts than White people, even after accounting for arrest characteristics and criminal histories (Nicosia, MacDonald, and Arkes 2013).

When White people have been depicted as the subject of drug crises, policy tends to garner medicalized responses. Before the modern War on Drugs, Congress implemented mandatory minimums for certain narcotics offenses with the Boggs Act of 1951 and Narcotics Control Act of 1956, notably when Black-White drug arrests shifted from 11 percent-67 percent to 63 percent-36 percent (Murakawa 2014). As racial disparities in drug arrests reversed in the 1960s and 1970s, Congress repealed mandatory minimums, arguing that they "hamper the process of rehabilitation, infringe on proper judicial roles, and exacerbate problems of youth alienation by enforcing a rigid and excessively punitive system" (Murakawa 2014:120). Lawmakers historically focus on rehabilitation, lifting mandatory minimums, and drawing back other punitive policies when the racial composition of narcotics arrests shifts from predominantly Black to White (Murakawa 2014). Some researchers have even conceptualized these dramatic shifts in criminal justice policy as a pendulum (Goodman et al. 2017).

The Present Study

While historical examples of drug crises are useful to understand how race shapes responses to drug use, most research precedes the implementation of modern drug policy, namely the Controlled Substance Act of 1970. Fewer studies examine media portrayals and public sentiment of modern drug use to capture both explicit and implicit racial bias. The current study does so by focusing on the recent opiate and crack cocaine crises as exemplar cases. We select these crises for key reasons related to medicalization and criminalization, respectively.

First, these substances differ by the racial groups most impacted in terms of health outcomes. Figure 1 depicts cocaine and opiate mortality by race and drug. Measured by mortality, any cocaine-related health threat during the 1980s and 1990s crack cocaine crisis affected mostly Black people. Beginning in 2000, a divergence occurs between the White and Black opiate overdose rate, whereby the White rate considerably outpaced the Black rate through 2010. This period corresponds to the "first wave" of the opiate crisis related to prescription opioids (Ciccarone 2019). The characterization of the opioid crisis as a White problem during this first wave was not without reason, as structural racism in healthcare led to practitioners being more willing to believe White people's reported pain and their subsequent, disproportionate overprescribing of opioids (Burgess et al. 2008; Pletcher et al. 2008). After 2010, a varied picture emerges when the opioid crisis shifts to the "second" and "third waves" related to illicit heroin and fentanyl, respectively, during which illicit opioids posed more of a mortality threat for Black people than cocaine *ever* had.

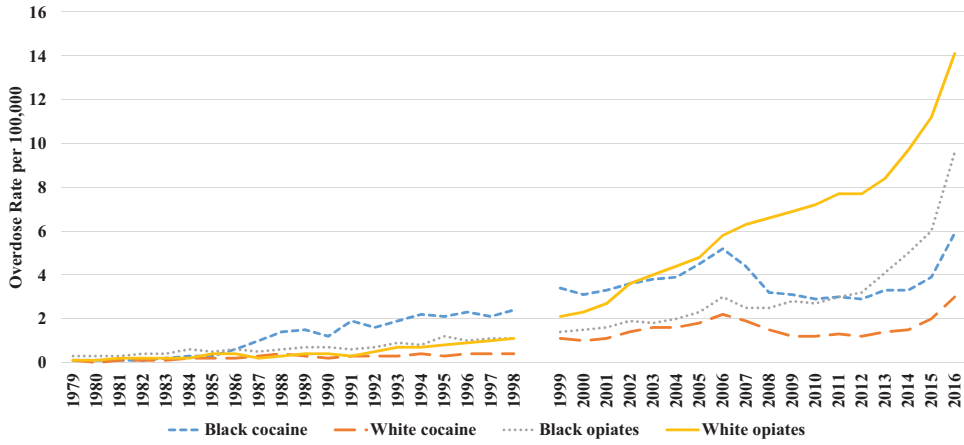

Figure 1. Overdose rates per 100,000 by race and drug class 1979–1998 (ICD-9) and 1999–2016 (ICD-10)

Sources: Centers for Disease Control and Prevention Wide-ranging Online Data for Epidemiologic Research (CDC WONDER) Compressed Mortality Data 1979–1998 and Multiple Cause of Death Data 1999–2016.

Note: Rates from 1979 to 1998 are from ICD-9 codes, and rates from 1999 to 2016 are from ICD-10 codes. These rates are not directly comparable. Rates from 1979 to 1998 represent intentional and unintentional overdoses as the primary cause of death. Rates from 1999 to 2016 represent intentional, unintentional, and unknown intention overdoses as a contributing cause of death among the possibility of several causes. From 1979 to 1998, separating the data by Hispanic and non-Hispanic was not possible, and thus the rates include both. The data from 1999 to 2016 presented does not distinguish Hispanic and non-Hispanic to provide as consistent rates as possible between the two periods. Querying only non-Hispanic for the latter period results in an average difference in the overdose rate over the period that is 0.09 higher for Blacks and 0.44 higher for Whites.

Second, these drugs differ in the individuals most impacted by criminal justice responses. Crack cocaine markets emerged in Black and Latino neighborhoods with little economic opportunity and contributed to an increasing trend in violence (Moore and Tonry 1998). Subsequently, crack cocaine became the target of punitive policy through the War on Drugs (Alexander 2010; Garland 2001). Figure 2 depicts possession arrests by race and drug to demonstrate racial inequities (note differing scales by drug). The enormously different arrest rates for cocaine, together with its association with violence, may perpetuate a criminalization frame among those most affected, namely Black people. While punitive affinities have not disappeared, the opiate crisis developed in a context of relatively low crime rates and bipartisan efforts to undo America's punitive past (Goodman et al. 2017). Black cocaine arrests fell during this period, while opiate arrests increased for both White and Black people, although these rates pale in comparison to the criminalization of cocaine.

Given the relationship between media, public opinion, and policy (Baum and Potter 2008), we consider how these medical and criminal frames were incorporated into media coverage of each crisis. The trends outlined above support this possibility, and we assess the degree to which these crises were publicly framed in this manner. We also examine how race was explicitly and implicitly referenced, particularly given the disproportionate mortality and arrest rates of Black people during the crack crisis and racial heterogeneity in overdoses and arrests during the opiate crisis.

We then consider whether public support for criminal and medical approaches align with these frames. Limited evidence suggests that the public supports drug treatment rather than arrest for opiate use (Cook and Brownstein 2017). However, historical drug research suggests these findings

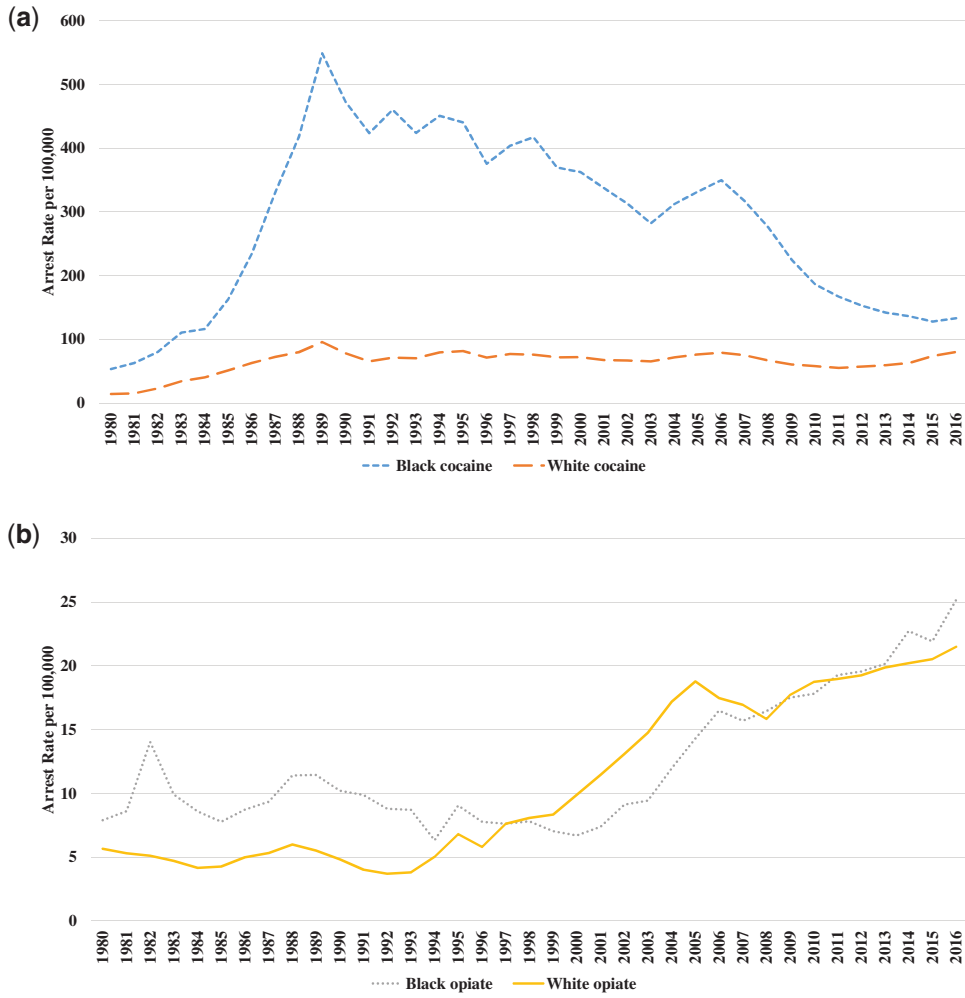

Figure 2. Possession arrest rates by race and drug class 1980–2016

Sources: FBI Uniform Crime Report.

Note: Drug types are presented on different scales.

may not apply to drugs associated with racial minorities (Murakawa 2014; Musto 1999). We analyze whether current public opinion of drug use reflects recent policy shifts toward treatment, regardless of race and drug type, or if racial biases persist. That is, when the pendulum of criminal justice policy (Goodman et al. 2017) swings away from criminalization and toward lenient rehabilitation, are there instances where public opinion does not swing with it? As negative perceptions of people who use crack cocaine, including false stereotypes, persist (Copes 2016; Copes, Hochstetler, and Williams 2008), public opinion may be slow to adapt. Taking this longer historical period into account and current drug policy, we hypothesize that the public will be more likely to support drug treatment for White users and drugs associated with White people (i.e., heroin and opiates), and more likely to criminalize Black users and drugs associated with Black people (i.e., crack cocaine). Alternatively, opiate policies that emphasize rehabilitation may be in reaction to broader preferences for medicalization, even for non-opiate drug use and regardless of race. In this case, we expect no difference in public support for drug treatment by race and drug type.

RESEARCH DESIGN AND METHODS

We employed content analysis of news articles covering both crises as well as two vignette experiments. The content analysis assessed themes emerging in coverage of each crisis to set the background for how these frames may influence public opinion. The first vignette experiment considered whether drug type affects public support for medicalization or criminalization. The second vignette experiment examined whether support for medicalization is invariant to the drug type and users' race.

Qualitative Content Analysis

To assess how coverage incorporated medical and criminal frames, we randomly selected 400 news articles from *The New York Times* (NYT) and *The Washington Post* (WP) using Factiva and ProQuest; 200 covering the crack crisis between 1985 and 1994, and 200 covering a period of the opiate crisis between 2007 and 2016. These widely circulated news sources are among the most used national news outlets in media discourse research. We chose these years for the crack crisis to capture rhetoric before and after the Anti-Drug Abuse Acts of 1986 and 1988, which are also used in prior literature (Humphries 2011). For the opiate crisis, we selected dates mirroring the sharp increase in opiate mortality that began around 2007 and continued into 2016 (Ciccarone 2019), the year in which Congress passed CARA to address opiate addiction. An uptick in media coverage and framing of opiate use as a crisis did not begin until around 2007, even though increases in opiate use are evident before this period.[1]

Initial search efforts using the search terms "heroin" and "crack cocaine" generated 9,918 news articles. Although we used "heroin" due to its extensive history relative to newer prescription opioids, most articles (70 percent) also discussed the broader opiate crisis. We used weighted random sampling to select 400 articles and ensure each year and news source were proportionate to their representation in the full population of articles. The random selection process prevents systematic bias in the number of news reports and editorials in the sample, ensuring that each was proportionate to their presence in the full population.

We used summative and directed content analysis methods, which allowed us to search for keywords informed by prior literature and to analyze underlying meanings within their context to generate themes across and within each drug crisis (Hsieh and Shannon 2005; Schreier 2012). We coded data using NVivo to aid in the organizational process and manually completed the coding using line-by-line coding techniques. We created our initial coding device informed by the literature, coding for race, public health or drug treatment (i.e., medicalization), and public safety (i.e., criminalization). Through an iterative process (Schreier 2012), another theme arose: personal narratives.

When coding for medicalization, we included references to health-related professionals and officials, institutions (e.g., hospitals, rehabilitation centers), health statistics, treatment, and preventative health measures. For criminalization, we included references to criminal justice actors and institutions such as police, prosecutors, prisons, and the Drug Enforcement Administration (DEA). Race codes included both explicit statements and words implicitly associated with racial groups, such as suburban, rural, inner-city, and urban (Bonilla-Silva 2002; Gilens 1996; Hurwitz and Peffley 2005). When discussing an article, we described a person or group's race when explicitly referenced or accompanied by a picture that identified the subject's race. We also describe instances where articles use racially-coded language, which implicitly signals race (e.g. urban, inner-city, suburban) without directly referencing it (Bonilla-Silva 2002; Mendelberg 2001). Finally, we coded for personal narratives when articles profiled drug users or included specific details about their lives.

1 For example, the number of stories mentioning heroin in the total population of news articles was 395 stories in 2007 and 1,489 in 2016.

Quantitative Vignette Experiments

We conducted two experiments: experiment 1 where drug type was the sole treatment (n=308), and experiment 2 which varied both drug type and race (n=630).[2] We published both Qualtrics survey experiments on Amazon Mechanical Turk (MTurk) to recruit and collect experimental data. MTurk worker demographics are representative of U.S. Internet users, making it an ideal tool for social science research compared to laboratory methods (Goodman and Paolacci 2017). Both vignette samples (discussed below) are similar to U.S. population characteristics, except that our respondents are more educated than the general population.[3]

Our survey first asked respondents for demographic information. We queried respondents' age, gender, race, ethnicity, highest education, and locale size. Although additional options were provided, we collapsed education and race into fewer categories due to small cell sizes. Analytic categories for these variables are shown in Tables 1 and 2, described below. Next, on a separate page, we randomly assigned respondents to a fictional news article that mirrored a report of either heroin or crack cocaine possession:

> When a man was pulled over for a minor traffic violation, police discovered that his passenger had one gram of [heroin/crack cocaine] in his possession.
> According to a statement issued by the Police Department, James Stewart, 26, was driving northbound on Main Street when he was pulled over for driving with expired plates. Upon approaching the vehicle, the officer noticed one gram of what was later identified as [heroin/crack cocaine] in the vehicle belonging to the 28-year-old passenger, Allen Young.
> Stewart was cited for the traffic violation and Allen Young was taken into custody by the City's Police Department.

We used an amount of either crack cocaine or heroin (one gram) attributable to personal use, as opposed to sales or trafficking, and we selected names using the Census to remain race-neutral. In experiment 1, the independent variable of interest is the drug type, divided about evenly among respondents.[4] The text in experiment 2 was identical, but we added a mugshot of a young, adult Black or White man, with a quarter of respondents receiving each treatment.[5]

Respondents were then asked whether the person in possession of the drug should be charged with a crime or assigned to drug treatment, forcing them to choose one response. Then we allowed respondents to rate their support for both responses by asking, "On a scale of 1–10 with 10 being the strongest, how strongly do you agree that Allen Young should be. . ." (1) ". . .assigned to mandatory drug treatment?" and (2) ". . .charged with a crime for the drugs in his possession?" We randomly rotated the order of these two scale questions to avoid potential response bias. These three questions represent our outcomes. For a completely randomized experimental design such as ours, the analytic methods are straightforward. Thus, we rely primarily on bivariate tests, but also refer to regression models (i.e., logistic regression for the binary outcome and OLS regression for the scales) in Appendices A and B to describe pairwise comparisons and demonstrate robustness to the inclusion of covariates, which is expected due to the randomization process.

2 Sample sizes were determined by power analysis for a bivariate chi-square test with medium effect size, although observed effect sizes far exceeded this a priori assumed effect.

3 Only MTurk adult users in the United States with a 95 percent or greater accuracy rating could view and complete our survey. Accuracy ratings are based on MTurk Recruiters' ratings of the quality of workers' previously completed tasks.

4 The slight imbalance in both experiments is due to the randomization mechanism in Qualtrics.

5 The two images were selected from publicly available headshot images of models in a T-shirt on Shutterstock. We presented the two images to a class of 80 undergraduates to elicit the supposed ages and race of the person. In an open-ended race question, the undergraduates wrote Black or African American and White or Caucasian with 100 percent accuracy. The average age written for the Black image was 26.4, with a range of 17 to 34. The average age written for the White image was 24.1, with a range of 16 to 37.

RESULTS

Qualitative Results

Public health and drug treatment. Figure 3 shows the prevalence of each theme across drug crises. Consistent with current policies, media coverage of the opiate crisis was highly medicalized, emphasizing drug treatment, rehabilitation, and prevention. A public health frame was used in 42 percent of articles referencing heroin. Articles implicitly and explicitly depicted opiate use as a predominantly young, White American social problem, while neglecting coverage of opiate addiction's growing threat in Black communities. Politicians, family members, friends, and media outlets advocated against criminalization as a legitimate option to address the crisis because they perceived people who use heroin as non-threatening and deserving of social services.

Media coverage depicted opiate addiction as a bipartisan issue, calling for collective action. Politicians advocated for increased treatment access, including naloxone and addiction facilities. Public officials in states heavily affected by opiates requested and received federal funding to increase treatment access and held Congress accountable for this "urgent and critical" (NYT 2015) crisis. One article stated:

> When Massachusetts Gov. Deval L. Patrick (D) declared a public health emergency in March because of soaring opiate abuse, he directed the state's health department to make naloxone available immediately to all police, firefighters, and other first responders, and to make it more accessible to the families and friends of drug abusers. (WP 2014)

At the federal level, the U.S. Surgeon General issued a report urging the nation to treat addiction as a chronic illness and called the crisis "a moral test for America" (NYT 2015).

News coverage included extensive interviews with White, suburban families dealing with teenagers addicted to heroin. Articles portrayed White mothers taking active steps to prevent heroin addiction. For instance, Maureen, a White mother from a middle-class town in New Jersey, made educational prevention part of her life when her 19-year-old son became disabled after suffocating on vomit while using heroin. While discussing the importance of preventative measures, she stated, "I hate to use my son as a visual aid. . . . But this is what heroin can do to you. It may not happen the first time you try it or the second time, but how much are you willing to risk to party?" (NYT 2008)

Criminal justice representatives in suburban areas voluntarily took on roles educating teenagers about the problems opiate use causes. News outlets interviewed police officers who were often first responders during drug overdoses. A lawyer and former police officer stated in one article: "To sit down and tell kids, 'no, no, no' just doesn't work . . . we have to educate them, and we have to know that sticking our head in the sand isn't the answer. We have to come up with some sort of plan for education for kids not to be afraid" (NYT 2008).

While the public health frame surrounding the opiate crisis focused on those who use opiates and the need for drug treatment, the media predominantly framed crack cocaine as a public health concern (13 percent) when focusing on infant health. Though there was a public health concern for Black infants, media vilified Black mothers who were addicted to crack, with headlines such as, "Crack Babies: The Worst Threat Is Mom Herself" (WP 1989). Interviews with Black women included statements referencing their lack of knowledge about prenatal care, nutrition, and drug use while pregnant, which put pregnant Black women's parenting skills and battle with drug addiction on display and widely available for public scrutiny.

Media statements from scholars, law enforcement, and politicians suggested that drug treatment for crack cocaine addiction would be ineffective. Health professionals made statements such as: "there would be no advantage to a cocaine-maintenance program" (WP 1989). Countervailing voices of

local public officials only rarely appeared in the articles. For example, one mayor stated: "The state has been outrageously neglectful in dealing with the threat [crack] and failing to provide aid to thousands of New Yorkers who need it . . . they are fiddling while Rome burns" (NYT 1986). Rather, political officials disseminated neoliberal beliefs, urging parents and family members to "talk to their children about drugs, not the next day, or the next week, but that very night" (WP 1989). These statements effectively put the onus on families, while providing minimal government assistance and concerted efforts to address crack addiction as a public health issue.

Public safety and criminalization. A public safety frame was present in 32 percent of opiate crisis news articles. While perhaps at first surprising, the content of those articles demonstrates a much different approach than simple criminalization. Through media coverage, public representatives emphasized bridging gaps between police and public health officials to decrease overdoses and ensure drug treatment. For instance, the governor of New York allocated state money to increase naloxone access for emergency medical workers, including police officers. Law enforcement officers were depicted as empathetic about opiate addiction and their respective communities, consequently perceiving drug treatment as part of the solution. The New York police commissioner stated: "Officers like naloxone because it puts them in a lifesaving opportunity" (NYT 2014). Another article reported: "In Massachusetts, where the governor just declared a state of emergency over opiate-related deaths, a small-town police chief now offers amnesty to addicts seeking help" (WP 2016). Another article wrote:

> . . . the police have come to view addiction as a disease, not just a law enforcement issue, and have joined with social service providers to take a more data-driven, coordinated approach to homes with multiple problems. Agencies and residents have joined forces to revitalize their neighborhoods and eliminate blight. (NYT 2014)

Criminal justice officials testified before Congress to advocate for medicalized approaches and increase funding to combat the crisis. The deputy administrator of the DEA testified that heroin abuse was rising, and "some users of prescription opiates turn to heroin, a much-cheaper opiate that provides a similar high" (WP 2013). Criminal justice actors in predominantly White towns were even dismayed to discover that youth possessed and distributed heroin. A small, rural town's prosecutor stated: "It was quite a dramatic revelation to us, that a significant source of the heroin in our small towns was our local kids. . . These were fresh-faced, educated kids, not dropouts" (NYT 2009).

In stark contrast, 55 percent of crack news coverage presented police officers through largely a strict law and order frame that emphasized apprehension and criminalization of people who use crack and distributors. Media described heavily armed police officers capturing crack dealers and busting drug operations. The racial or ethnic group arrested during drug busts was reported with descriptive statements such as: "The crack house, according to the police, was run by a New York-Jamaican posse" (WP 1988); "Jamaican drug gangs have added grenades to their arsenals of automatic weapons and have moved from their East Coast bases to establish crack markets as far away as Alaska and Hawaii" (WP 1988); and "Pedersen [former director of Alcohol, Tobacco, Firearms, and Explosives] identified the three men as natives of Jamaica" (WP 1988).

Linking crack cocaine to violence and vice and using racially coded language such as "inner city" and "urban" helped facilitate criminalization as well. Media reported statements such as: "Although the police say it is too early to say exactly what role cocaine played in the incident, officials point out that as crack has replaced heroin as the drug of choice in the inner city, they are seeing rising numbers of homicides, people resisting arrest and violent, unpredictable behavior among abusers" (NYT 1987); and, "There are girls, no more than junior high school age, who can be seen trekking into the park, where men, much older than they, turn them into whores for hits of cocaine. This kind of

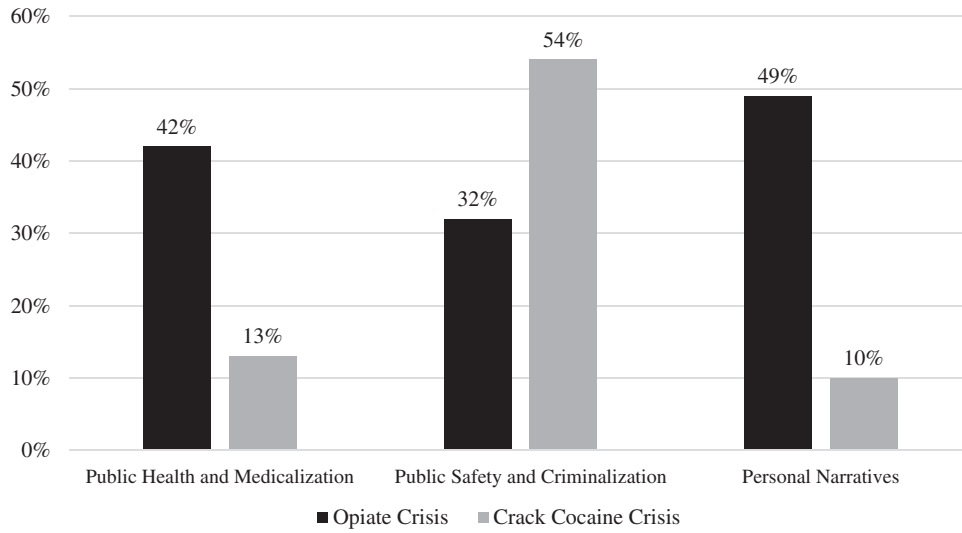

Figure 3. Frequency of qualitative themes by drug crisis

insanity is spreading through urban areas like wildfire" (WP 1989). In other instances, race was mentioned explicitly, such as in an article about a White House funded ad campaign specifically targeting Black people and instructing them to honor their ancestors, since "Drug abuse is the new slavery" (WP 1989).

The substantial focus on crime and public safety essentially silenced the plight of Black people addicted to crack cocaine and their families. The criminalization frame and police attitudes about their roles in combating the crack crisis influenced their response to Black people battling addiction. For example, Michael Harris, a 19-year-old Black man from Washington D.C., swallowed a crack cocaine rock during an arrest to avoid a drug charge. After being in custody for a few hours, Michael told officers he felt sick, but the police ignored his health concerns. Hours later, he collapsed and died from an overdose. After acknowledging Michael was wrong for possessing crack, his mother simply stated, "They [police officers] let my son die" (WP 1991).

Personal narratives. Personal narratives appeared in 50 percent of the opiate crisis news articles, which were used to advocate for drug treatment and destigmatize opiate addiction. Stories humanized people addicted to opiates, presenting them as non-threatening, youthful White suburban Americans, and provided family and friends opportunities to discuss their loved ones in a redemptive light. Personal stories also became the impetus for state legislation focused on prevention, rehabilitation, and treatment. For example, legislators in two predominantly White, affluent counties proposed the Natalie Ciappa Law, named after a teenager who died from a heroin overdosed. The proposed bill would inform the public of heroin distribution and possession arrests so that parents and school officials could "be on the lookout" and "know vital information that could save lives" (NYT 2008). Natalie's family was given the opportunity to humanize her by discussing her good character, describing her as "Everyone's dream child. . . She was in the honor society, a cheerleader, and sang the national anthem at school events" (NYT 2008). Making Natalie the face of this legislation allowed lawmakers to draw on positive characteristics and emotions to gain public support.

More examples from families demonstrate this frame. The mother of Nicole, a young woman addicted to heroin, described her daughter as "a fun-loving 22-year-old" from a "college-educated suburbanite" family (WP 2008). Other family members made statements that humanized addicts and worked to destigmatize addiction, such as "[My son] walked to a friend's house after taking heroin,

got tired, sat on the side of the road and never got up—my beautiful 19-year-old son, found by a man walking his dog" (NYT 2008); and, "We are an intact family. He had a brother, mom, and dad, a job, a girlfriend, a car, and a $7,000 scholarship to college" (NYT 2008). Another family member stated, "My sister was not dumb. . . She was pretty, she was sweet, she was headed down the right path, and she still ended up dead. . . She proved it can happen to anyone" (WP 2009). Another mother said, "I wanted people to know that I wasn't ashamed of him . . . people are so ashamed of addiction. There's such a stigma, and it's just not right" (NYT 2014).

Media coverage included statements from medical professionals who attested to the good character of people addicted to opiates. A director of a drug treatment center with a large population of White, suburban youth stated, "You've got kids falling apart. You've got families falling apart. . . you've got people who have got no idea what to do, and they're all saying the same thing: 'This was a good kid. This was a good kid'" (NYT 2014). By incorporating these humanizing and destigmatizing personal narratives into opiate crisis coverage, the broader message portrayed is that these individuals are non-threatening, good people from communities where heroin use is not the norm. These personal testimonies give people addicted to opiates and their families a voice to facilitate framing opiate addiction as a public health concern rather than a criminal one.

In contrast to opiate news coverage, redemptive narratives describing the personal stories of crack addicts were largely absent in the news articles analyzed. Rather than redemptive narratives, demonizing personal narratives appeared in ten percent of news coverage of the crack crisis, usually to warn the public of the dangers of its use. These narratives dehumanized people addicted to crack, presenting them as a threat to public order. Articles relied on statements from law enforcement and health professionals, rather than families and friends who personally knew those battling addiction. One police officer stated that people using crack "binge without eating, sleeping or bathing until their crack and money are gone and they collapse physically . . . addicts break into vacant buildings to smoke and share pipes. They also share a common squalor" (WP 1988). Another Baltimore officer said: "[People addicted to crack] eat and sleep [in crack houses]. Young women hang around to share a pipe or a rock and trade sex for it. It makes you wonder what depths people actually go to be associated with the drug" (WP 1988). A health professional treating crack addiction asserted: "We see them once or twice and then they disappear because they know how to make themselves feel better than we can [and] sooner. They get high" (WP 1988). One hospital director spoke to Congress about the public health concern for children: "While it may be incredible to some of you here to think that a mother would just walk away from the child she has so recently delivered . . . it is a very real and increasing phenomenon among urban, drug-abusing females" (WP 1989). While health and criminal justice professionals used personal narratives of White addicts to advocate for treatment options to combat opiate use, they painted Black people addicted to crack as untreatable and irredeemable.

These articles sometimes used personal stories of Black mothers who delivered infants addicted to crack to dissuade crack use. According to an article, a Black pregnant woman, who was addicted to crack, said she knew about the dangers involved with using crack while pregnant, but it made her so irrational that she could not resist. As she gave birth, she felt guilty about the harmful complications her child could experience. After telling her story, the article discussed procedures and protocols that babies born addicted to crack go through and the complications that result as the child develops. Personal narratives of Black women operated as prevention tactics, without the additional political and community advocacy through media to provide addiction services to Black communities.

Summary. Our content analysis demonstrated that the crack cocaine crisis was criminalized through a public safety frame, while the opiate crisis was medicalized through a public health frame. Even when public safety was invoked during the opiate crisis, the articles depicted attempts to provide law enforcement with medicalized alternatives. Explicit and implicit mentions of race linked the

criminalization and medicalization frames to Black people and White people, respectively. Additionally, personal narratives humanized White people and destigmatized opiate use, while vilifying Black people and framing people who used crack as untreatable. Next, we consider whether current public opinion regarding support for drug treatment or criminal punishment follows the more recent medicalized frame of the opiate crisis, or if support depends on the substance and person's race as a consequence of the enduring racialized perceptions of crack cocaine as unamenable to treatment.

Quantitative Results

Experiment 1. Table 1 shows the results for experiment 1. As expected, we find no significant difference between the two treatments among the covariates, except for the race of respondents ($p<.05$). By chance, fewer Black respondents received the heroin article than the crack cocaine article (5.6 percent vs. 10.8 percent, respectively) and more Hispanic respondents received the heroin treatment than the crack cocaine treatment (11.9 percent vs. 2.7 percent). To adjust for any imperfect randomization, we describe model results that include participant characteristics.

Recall that our vignettes were identical, except for the drug type mentioned. Our first outcome constrained respondents to select *either* a criminal charge or drug treatment for the passenger in possession of the drug. As depicted in Figure 4, we find stark, significant differences between those respondents randomly assigned the vignette mentioning heroin compared to crack cocaine ($p<.001$). Of those receiving the heroin vignette, 73.8 percent support drug treatment for the passenger in comparison to only 26.2 percent of respondents supporting criminal charges. By contrast, 56.8 percent of those receiving the crack vignette support a criminal charge compared to 43.2 percent supporting drug treatment. The odds of respondents who received the heroin vignette supporting drug treatment over a criminal charge are 3.7 times higher than those assigned the crack cocaine vignette (see also Appendix A, Model 1). We also had respondents select on a scale from 1 to 10, how much they agree that the passenger should receive either a criminal charge or diversion to drug treatment, where we find significant differences ($p<.001$). Respondents who receive the heroin vignette rate drug treatment higher (7.7) than those who receive the crack cocaine vignette (6.7), while those who were randomly assigned the crack cocaine vignette rate a criminal charge (5.9) higher than respondents who receive the heroin vignette (4.3). Appendix A shows that each of these bivariate comparisons are robust to the inclusion of covariates in regression models. Experiment 1 demonstrates that, even in the absence of the passengers' race, respondents overwhelmingly support criminal charges as the more appropriate response to crack cocaine possession, while drug treatment was most preferable for heroin possession. These results suggest that respondents may associate particular drugs with different racial groups, but this experiment does not cue the race of the user.

Experiment 2. Results for experiment 2, which included mugshots of Black and White men to explicitly signal race, are shown in Table 2. As expected, we find no significant difference between the four conditions on any of the covariates.

We first turn to the binary response (i.e., a criminal charge versus drug treatment). Figure 5 shows that the race of the user matters, while Table 2 confirms a significant association ($p<.001$). For the Black user condition, the drug type is irrelevant. Respondents support a criminal charge about 60.0 percent of the time, on average, for Black users across drug types, and support drug treatment only 40.0 percent of the time. By contrast, respondents assess White drug users differently, with 69.4 percent of respondents who received the vignette of the White heroin user supporting drug treatment, and only 30.6 percent of respondents supporting a criminal charge. For White crack cocaine users, drug treatment remains the most common response, but at a reduced rate with 57.5 percent supporting treatment. To determine which pairwise comparisons are significant, we report the odds ratios from a logistic regression model (see Appendix B, Model 2), again noting that the treatment effects

are robust to the inclusion of covariates. There is no evidence that vignettes featuring a Black heroin user significantly differ from the results of vignettes with a Black crack cocaine user, confirming findings from Figure 3. This suggests that the penalty for Black people is invariant to the drug type. The case is different for White users, who consistently receive higher support for drug treatment as opposed to criminal charges. Vignettes featuring the White heroin user have 3.48 times higher odds ($p<.001$) of support for drug treatment compared to Black crack users, and 3.23 times higher odds ($p<.001$) of support for drug treatment relative to Black heroin users. Similarly, a White crack user has 2.06 ($p<.01$) and 1.91 times higher odds ($p<.01$) of garnering public support for drug treatment relative to Black crack and heroin users, respectively. The pairwise comparison also reveals that the gap between responses for the White heroin and crack conditions is significant ($p<.05$). The odds of public support for drug treatment are 1.69 times higher for the White heroin user than for the White crack user.

Scales of support for either drug treatment or a criminal charge confirm patterns emerging from the binary outcome, with a significant association between the four experimental treatments and the two scales ($p<.001$). For vignettes featuring a Black mugshot, there are nearly identical levels of support for both drug treatment (6.3 for heroin, 6.1 for crack) and a criminal charge (6.3 for heroin, 6.4 for crack). Like the binary outcome, when vignettes featured a White mugshot, respondents rate their agreement with drug treatment considerably higher (8.0 for heroin, 7.2 for crack) than a criminal charge (5.0 for heroin, 5.4 for crack), regardless of the type of drug. In terms of between-group differences, the significant comparisons for the scales are the same as that of the binary outcome in all but one case (see Appendix B, Models 4 and 6). The difference between the White heroin and White crack conditions is not statistically significant for respondent ratings of their support for a criminal charge.

DISCUSSION

Mass media is a critical site for the (re)production of substance abuse narratives (Cohen 1972), which can have large and enduring impacts on public opinion and social policy (Baum and Potter 2008; Beckett 1997). Sociological theory points to two possible reactions to drug crises: criminalization and medicalization. For the former, media coverage and politicians via the media have historically deemed substances associated with racial and ethnic minorities a societal threat (Musto 1999). For the latter, extant studies of other deviant phenomena show that White people tend to receive medical pathways, which frame their behavior as treatable and protect them from criminal narratives (Heitzeg 2015). Recent changes in drug policies suggest that the United States has shifted from predominantly criminalizing drug use to considering legalization for certain drugs and treatment for others. We used crack cocaine and opiates as cases to analyze the extent to which media portrayed these crises using medicalized, criminalized, and racialized frames and to examine whether public support for medicalized and criminalized approaches is independent of both the race of people who use drugs and drug type.

Results demonstrate that despite a recent legislative shift toward medicalization and away from criminalization, racial biases continue to influence public opinion of drug use. Experimental data show that the public continues to view crack cocaine and drug use by Black people through a criminal lens, while perceiving opiates and drug use by White people as deserving of treatment. These racial disparities are striking, given that vignettes included an amount of each drug (i.e., one gram) attributable only to personal use and the sample of respondents were exposed to the shift in drug policy over the past 30 years.

Despite increased opiate mortality among Black people and similar arrest rates noted in Figures 1 and 2, we find that media coverage overlooks increasing Black opiate use within the context of the higher White opiate overdose rate. Vignette results show that the public is more likely to support

Table 1. Vignette Experiment 1 Descriptive Statistics and Tests of Association

	Overall	*Heroin*	*Crack Cocaine*	*χ2 or t-test*
Participant Characteristics				
Age	36.757	35.906	37.466	t = 1.283
Gender: Female	0.482	0.506	0.453	$\chi^2 = 0.883$
Race/ethnicity				$\chi^2 = 11.443^*$
White	0.748	0.725	0.770	
Black	0.081	0.056	0.108	
Hispanic	0.074	0.119	0.027	
Other	0.097	0.100	0.095	
Education: Bachelor's or higher	0.559	0.588	0.534	$\chi^2 = 0.901$
Location				$\chi^2 = 1.785$
Urban	0.330	0.319	0.345	
Suburban	0.463	0.444	0.480	
Rural	0.207	0.238	0.176	
Experimental Variables				
Binary Outcome				$\chi^2 = 29.599^{***}$
Criminal Charge	0.411	0.262	0.568	
Assigned to Treatment	0.589	0.738	0.432	
Treatment Scale (1-10)	7.217	7.738	6.647	t = -3.480***
Criminal Charge Scale (1-10)	5.071	4.275	5.899	t = 4.194***
	N=308	N=152	N=148	

*$p<.05$,
**$p<.01$,
***$p<.001$

criminal charges for Black people, regardless of drug type. With the violence that plagued Black neighborhoods due, in part, to crack cocaine markets (Moore and Tonry 1998) and the enduring negative image of people who use crack cocaine (Copes 2016), we contend that lasting beliefs of Black people as inherently criminal and the inattention to Black people who use opiates during opiate crisis coverage may explain why public support for treatment did not extend to Black people who use heroin (Russell 1998). That is, criminalization is so inextricably linked to Black people (Welch 2007) that even amid a treatment-oriented shift in policy, Black people who use drugs are still perceived as criminals. Even if treatment is more widely available because opioids are depicted as a White social problem, Black people are unlikely to benefit from increases in treatment availability, given poorer access to social services (Archibald and Rankin 2013) and lower likelihoods of receiving opioid substitution therapy (Lagisetty et al. 2019).

In comparison, White people who use drugs were more likely to receive public support for drug treatment for both heroin and crack cocaine use in our experiments, which is not surprising when considering how news coverage portrayed White people who use opiates as victims of a social problem beyond their control. Personal narratives in news articles humanized and portrayed drug use by White people as non-threatening and deserving of redemption, which helped to destigmatize opiate addiction. Even the focus on public safety largely highlighted the expanding role of law enforcement as agents promoting public health. Interestingly, vignettes of White heroin users received higher support for drug treatment than White crack users. We deem this a penalty resulting from the drug type, where White people addicted to drugs associated with or predominantly used by Black people are

Table 2. Vignette Experiment 2 Descriptive Statistics and Tests of Association

	Overall	*White Heroin*	*Black Heroin*	*White Crack Cocaine*	*Black Crack Cocaine*	*χ2 or F-test*
Participant Characteristics						
Age	34.637	33.981	34.796	35.131	34.641	F = 0.370
Gender: Female	0.622	0.625	0.650	0.610	0.601	$\chi^2 = 0.892$
Race/ethnicity						$\chi^2 = 15.338$
White	0.652	0.618	0.656	0.606	0.732	
Black	0.143	0. 144	0.127	0.181	0.118	
Hispanic	0.111	0. 144	0.083	0.144	0.072	
Other	0.094	0. 094	0. 134	0.069	0.078	
Education: Bachelor's or higher	0.549	0. 594	0. 497	0.519	0.588	$\chi^2 = 4.563$
Location						$\chi^2 = 6.175$
Urban	0.370	0.412	0.331	0.406	0.327	
Suburban	0.444	0. 425	0. 497	0.394	0.464	
Rural	0.186	0. 163	0. 172	0.200	0.209	
Experimental Variables						
Binary Outcome						$\chi^2 = 39.242^{***}$
Criminal Charge	0.481	0.306	0.592	0.425	0.608	
Assigned to Treatment	0.519	0. 694	0.408	0.575	0.392	
Treatment Scale (1-10)	6.922	8.019	6.280	7.219	6.124	$F = 15.030^{***}$
Criminal Charge Scale (1-10)	5.776	4.975	6.344	5.438	6.386	$F = 7.330^{***}$
	N=630	N=160	N=157	N=160	N=153	

$^{*}p<.05$,
$^{**}p<.01$,
$^{***}p<.001$

stigmatized and punished, but not to a greater degree than Black people. This penalty for White crack users is consistent with media coverage that vilified crack cocaine use and advocated for criminalization as a response to the crisis, and reflects the dramatic change in heroin user profiles from equal across race to predominantly White over the past three decades (Cicero et al. 2014). Although there are instances in which a medicalized approach is less effective, such as with repeat offenders (Saum and Hiller 2008), research shows immense benefits of medicalized approaches to substance use relative to criminalized approaches, namely enormous cost reductions, less addiction, and lower recidivism (Zarkin et al. 2012). As a result of racial disparities that we find in public responses to drug use, racially inequitable benefits are likely to emerge as well.

We also find that news coverage during both crises explicitly and implicitly drew on race to facilitate a criminalized or medicalized response. Positive, redemptive, White racial frames were central to media coverage of the opiate crisis while negative, brutish Black frames dominated coverage of crack cocaine. Racial differences in responses to drug use by White and Black people are also consistent with research highlighting how racial fluctuations in drug arrests shaped the ways Congress framed and advocated for drug policies before the War on Drugs (Murakawa 2014). We speculate that personal stories of affluent White people were used to garner public support for addiction resources during the opiate crisis, while the focus on capturing drug distributors during the crack crisis numerically overshadowed the stories of Black people struggling with crack addiction, which portrayed them as

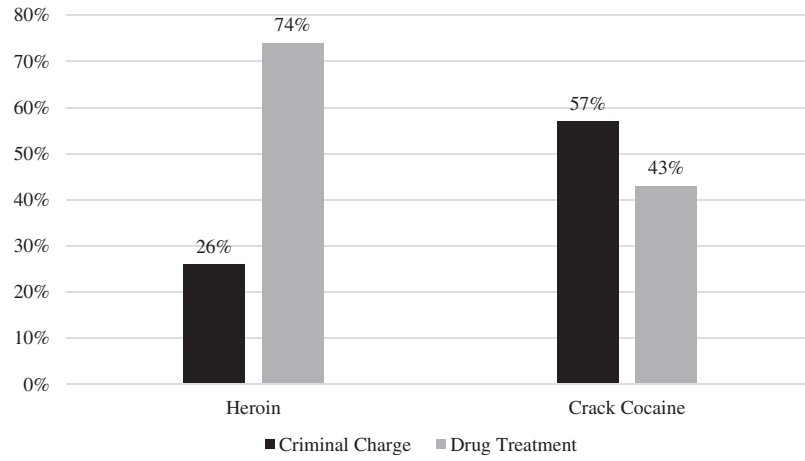

Figure 4. Percent of Experiment 1 respondents choosing criminal charge vs. drug treatment by drug type

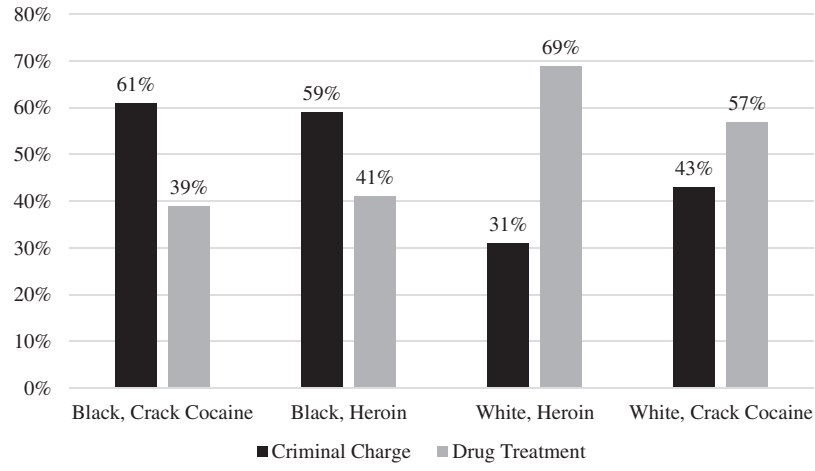

Figure 5. Percent of Experiment 2 respondents choosing drug treatment vs. criminal charge by drug user's race and drug type

untreatable and inhuman (Feagin 2010). The influence of the public and media on social policy (Baum and Potter 2008; Brooks and Manza 2006) is important, given the power that White communities have accumulated through gerrymandering and Black disenfranchisement, wherein policymakers face pressure to respond to their White constituents' concerns.

The years in our study also represent a period after the shift from overt to covert forms of racism (Bonilla-Silva 2006), which has been understudied in the context of drug crises. More recent media coverage incorporates implicit racial language, in addition to the explicit instances noted above. In experiment 1, we did not prime respondents with race in the vignettes. Yet, when asked to choose between drug treatment or criminalization, respondents were more likely to support treatment for heroin use and criminal charges for crack cocaine use. The fact that the public is more likely to support drug treatment for White people who use heroin compared to White people who use crack in experiment 2 provides further support that drugs covertly linked to certain racial groups may act as racial codes and receive differential treatment. These findings are consequential for racial minorities

and those who use drugs associated with them, indicating a need to ensure implicit biases do not affect the construction of future drug policy.

Like the inattention to Black opiate users, most news articles were also relatively inattentive to White, rural communities compared to suburban areas. One methodological explanation for this finding is that the news articles from two of the country's largest news outlets privilege the stories of 80 percent of the population (i.e., suburban and urban) over the other 20 percent (i.e., rural). Alternatively, focusing on affluent White opiate users ensures that opiate use does not become associated with poor Whites and/or racial and ethnic minorities (Tiger 2017), potentially jeopardizing the sympathetic framing and treatment-oriented response among the public. Another explanation is that affluent White people, who hold positions of power in society and are well-connected to other (White) powerful actors, control media narratives and direct attention to the social issues they care about most (Feagin 2006). Indeed, research suggests class position shapes who is subjected to punishment and afforded opportunities for drug treatment (Tiger 2017). Future research should further discern the relationship between class and race in responses to drug use.

Our study is not without limitations. First, we use news articles to broadly represent media coverage. News accounts of the crack cocaine crisis are probably more representative of overall media coverage during the period than the more recent news coverage of the opioid crisis, which has expanded to include a large array of online media sources that were not present during the crack crisis. Second, there are important pharmacological distinctions between opiates and cocaine-based drugs resulting in more readily available drug substitution treatment options for opiates (e.g., methadone), which may shape the public's response to these two drugs. Even if this is the case, the fact that respondents were more likely to choose drug treatment for White heroin users compared to Black heroin users suggests this may play only a small role.

Finally, although MTurk samples are more representative than other laboratory techniques (e.g., recruiting undergraduates), our samples are not an accurate representation of the national population. Rather, they are younger, more educated, lower-income, Whiter, and more liberal (Goodman and Paolacci 2017). Even considering this limitation, these categories overrepresent characteristics (i.e., higher education) that are associated with, on average, more progressive ideologies that would close racial disparities in public support for drug treatment and criminalization (Pew Research Center 2016). Considering this fact, our results are likely conservative. The tradeoff in lacking a nationally representative sample is the high internal validity of the experimental methods whereby randomization ensures respondent characteristics within the sample do not affect the relationship between the treatment and outcomes, which mitigates issues regarding sample representativeness (Keppel and Wickens 2004).

Our study demonstrates that race shapes whether the public perceives people who use drugs as deserving of a medical or criminal response. Results suggest that current drug policy's emphasis on treatment results from the perception of the opiate crisis as a public health threat to affluent White communities, rather than a broader change in responses to drug use. Our findings are consistent with prior work suggesting that White people are shielded from criminal narratives and provided opportunities for rehabilitation, while Black people are perceived as criminal threats in drug media coverage and among the public. Treating drug use by White people as a public health concern benefits them and criminalizing drug use by Black people serves to funnel them through the criminal justice system without proper addiction services. The social costs of such disparities are immense because medicalized responses to drug use not only reduce recidivism and the likelihood of relapse, they also provide positive societal benefits. If only 10 percent of incarcerated people who are eligible for diversion programs were enrolled, the United States could save $8.5 billion and would experience reductions in crime rates (Zarkin et al. 2012). As such, we do not suggest that White people who use drugs be criminalized, but rather that there be concerted efforts to ensure racially equitable treatment, regardless of the drug and the person using it.

Appendix A. Vignette Experiment 1 Regression Models (N=308)

	Logits of Assign to Drug Treatment (vs. Criminal Charges)				*OLS of Drug Treatment Scale*		*OLS of Criminal Charge Scale*	
	Model 1		*Model 2*		*Model 3*	*Model 4*	*Model 5*	*Model 6*
	β (S.E.)	*OR*	*β (S.E.)*	*OR*	*β (S.E.)*	*β (S.E.)*	*β (S.E.)*	*β (S.E.)*
Assigned Drug: Heroin (vs. Crack Cocaine)	1.305***	3.687	1.438***	4.214	1.089***	0.939**	1.624***	1.793***
	(0.245)		(0.268)		(0.313)	(0.316)	(0.387)	(0.390)
Participant Characteristics								
Age			0.003	0.997		0.001		0.018
			(0.012)			(0.015)		(0.019)
Gender: Female (vs. Male)			0.116	1.123		0.370		0.555
			(0.261)			(0.316)		(0.390)
Race/ethnicity (vs. White)								
Black			0.364	1.439		0.821		0.542
			(0.502)			(0.593)		(0.730)
Hispanic			-0.647	0.524		0.770		1.107
			(0.518)			(0.614)		(0.755)
Other			0.739	0.478		0.316		1.145
			(0.440)			(0.537)		(0.661)
Education: Bachelor's or Higher (vs. Lower)			1.139***	3.123		0.832**		1.280**
			(0.261)			(0.314)		(0.387)
Location (vs. Urban)								
Suburban			0.271	0.763		0.140		0.123
			(0.296)			(0.355)		(0.437)
Rural			0.242	0.785		0.881*		0.804
			(0.367)			(0.443)		(0.545)

*p<.05,
**p<.01,
***p<.001

Appendix B. Vignette Experiment 2 Regression Models (N=630)

	Logits of Assign to Drug Treatment (vs. Criminal Charges)				*OLS of Drug Treatment Scale*		*OLS of Criminal Charge Scale*	
	Model 1		*Model 2*		*Model 3*	*Model 4*	*Model 5*	*Model 6*
	β (S.E.)	*OR*	*β (S.E.)*	*OR*	*β (S.E.)*	*β (S.E.)*	*β (S.E.)*	*β (S.E.)*
Assigned Vignette (vs. Black crack user)								
Black heroin user	0.065	1.067	0.074	1.077	0.156	0.180	0.042	0.017
	(0.232)		(0.236)		(0.325)	(0.322)	(0.366)	(0.365)
White heroin user	1.256***	3.511	1.247***	3.480	1.895***	1.787***	1.411***	1.439***
	(0.238)		(0.242)		(0.323)	(0.320)	(0.365)	(0.363)
White crack user	0.741**	2.097	0.724**	2.062	1.095**	0.980**	0.948*	1.011**
	(0.230)		(0.236)		(0.323)	(0.322)	(0.365)	(0.365)
Participant Characteristics								
Age			0.013	1.013		0.005		0.019
			(0.009)			(0.016)		(0.013)
Gender: Male (vs. Female)			0.070	1.073		0.780**		0.332
			(0.175)			(0.235)		(0.266)
Race/ethnicity (vs. White)								
Black			0.452	0.636		0.738*		1.288**
			(0.252)			(0.338)		(0.383)
Hispanic			0.384	1.468		0.785*		0.144
			(0.290)			(0.380)		(0.430)
Other			0.288	0.750		0.240		0.163
			(0.297)			(0.403)		(0.456)
Education: Bachelor's or Higher (vs. Lower)			0.077	1.080		0.329		0.015
			(0.172)			(0.231)		(0.262)
Location (vs. Urban)								
Suburban			0.217	0.805		0.380		0.182
			(0.193)			(0.259)		(0.293)
Rural			0.614*	0.541		0.709*		0.654
			(0.252)			(0.336)		(0.381)

*p<.05, ** p<.01, *** p<.001

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