The Political Effects of Opioid Addiction Frames

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Abstract: Opioid abuse is a major public crisis. Unlike previous American drug epidemics, media coverage of opioids focuses on Whites and is often sympathetic, and treatment policies garner widespread support. Does sympathetic coverage of Whites explain support for public health over punishment? Prior research neglects this question, focusing on negative messages about nonwhites. In two preregistered experiments, including a national population-based survey of White respondents, we vary both valence and race using fully-controlled yet realistic news stories. Results show negative frames do not reduce political support for treatment, regardless of their racial ‘face’. By contrast, sympathetic frames increase political support for treatment, especially when portraying White users. This racial sympathy effect is explained by racial stereotypes and resentment. Sympathetic coverage of Whites partly explains strong public support for treatment over punishment. The results highlight the neglected importance of racially-selective sympathy in public health.

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Introduction

Drug overdoses are a leading cause of accidental death in the United States, and the leading cause of death for those under 50 (CDC 2020a, CDC 2020b). Most of those deaths are from opioids (CDC 2020d).5 Opioid deaths have increased dramatically, by almost six times since 1999 (CDC 2020c).6 The sheer scale and rapid increase of opioid abuse make it an important problem worthy of research.

However, there is an additional reason to understand the politics of the opioid crisis. Unlike previous drug epidemics, opioid abuse is viewed both sympathetically and as a problem afflicting White Americans (Collins 2019; Provine 2011; Reinarman and Levine 1997). Along with this racialized sympathy has come strong public support for treatment rather than punishment. Opioid abuse is viewed more as a public health problem afflicting White victims who deserve assistance than as a problem of social disorder perpetrated by nonwhite criminals who deserve punishment. These sympathetic racialized ideas characterize both public opinion and media coverage (Brown and Tucker-Seeley 2018; Cohen 2015; Seelye 2015).

Does sympathetic media coverage of a crisis shift public opinion toward assistance and away from punishment? Does sympathetic coverage matter more when the targets of sympathy are White? Specifically, do White Americans support policies that help drug users when they are portrayed sympathetically and as disproportionately White? Do sympathy, race, and robust assistance go hand in hand?

5 “Nearly 70% of the 67,367 [drug overdose] deaths in 2018 involved an opioid” (CDC 2020c).
6 “Overdose deaths involving opioids, including prescription opioids, heroin, and synthetic opioids (like fentanyl), have increased almost six times since 1999” (CDC 2020c).
There is reason to expect an affirmative answer. Media frames can substantially affect public views of issues and policies. Moreover, studies document the impact of the racial ‘face’ of a public problem on support for particular solutions (Bobo and Johnson 2004; Gilens 1999; Gross 2008; Hetey and Eberhardt 2014; Iyengar 1991; Valentino, Hutchings, and White 2002). Problems may be more likely to be defined as a “crisis” when they afflict many White Americans, who may thereby receive more public assistance (Strolovitch n.d.). Media coverage portrays opioid use as disproportionately affecting White Americans (Brown and Tucker-Seeley 2018; Cohen 2015; Seelye 2015). Public views and policy preferences may be sympathetic as a result.

However, to date, it has been impossible to know if the White racial ‘face’ of opioid abuse causes public sympathy, because media coverage is simultaneously sympathetic (McLean 2017; Netherland and Hansen 2016). Perhaps it is the sympathetic valence in itself, rather than the race of the victims, that accounts for support for assistance rather than punishment (Stone 2017). Or, it may be that race, sympathy, and support for treatment are merely correlated. It is also unknown whether sympathetic framing of drug abuse matters more or less than unsympathetic framing. Studies have yet to systematically test the causal impact of users’ race and the valence of coverage on support for policies and candidates.

This study uses two experiments, including a randomized survey experiment with a large, probability-based, nationally representative sample, to assess the independent impact of valence and racial frames. We also assess their interactive impact: whether sympathetic frames matter more with a White ‘face’, while unsympathetic frames matter more with a Black ‘face’. This design allows us to avoid the common problem of biased treatment estimates from observational mediating variables. Specifically, we directly vary a key mediating variable for the effect of
racialized coverage – the valence of the coverage. Moreover, by varying sympathetic and antipathic valence separately, we can examine the unique effects of racial sympathy, a neglected variable emerging as increasingly important in the study of Whites’ racial attitudes (Chudy 2019; Jardina 2019). The study also improves on the standard survey experiment, which typically uses stylized vignettes. Instead, it constructs full-length, vivid news stories closely modelled on actual news stories yet identical across conditions. To test whether the White ‘face’ of the problem generates more sympathy, we focus on the responses of White Americans, and examine whether racial or political predispositions moderate treatment effects (Banks 2014; Jardina 2019; Tesler 2012; Valentino, Hutchings and White 2002). This moderator hypothesis follows from findings that race in media stories activates Whites’ racial attitudes (Gilens 1999; Gilliam and Iyengar 2000; Mendelberg 2001; Peffley and Hurwitz 2010; Valentino 1999).

We find that sympathetic frames increase White support for treatment policy and for candidates who advocate it. Unsympathetic frames do not affect political views. This finding underscores the neglected importance of sympathy in the definition of public problems (Chudy 2019). Media may influence public choices not only by focusing on the depravity of morally culpable people who inflict harm – an unsympathetic frame – but also on the suffering of morally innocent people who are harmed – a sympathetic frame. The same group of people may be constructed either way, and this construction matters. Moreover, sympathetic frames increase support for treatment policy more strongly when portraying drug users as White rather than Black. This is the first controlled experiment we know of to report that support for policy assistance comes more easily for sympathetically portrayed White than identical Black Americans experiencing a public health problem. Finally, selective racial sympathy affects
support for treatment policy specifically among Whites who hold racial stereotypes and resentment. Among the most resentful, it also affects candidate choice and resistance to taxes.

This research helps fill a gap in the literature on race, media, and public opinion. Racialized problems such as welfare dependency and crime have largely been studied in relation to unsympathetic frames (Peffley and Hurwitz 2010). Scholarship has not focused on the racialization of problems framed with sympathetic frames. Although recent research explores Whites’ sympathy for racial minorities, it does not exogenously vary sympathy (Chudy 2019). This study varies sympathy and finds that sympathetic coverage of stigmatized behavior causes White Americans to favor government assistance over punishment. However, sympathy most strongly elicits support for government help when those engaged in stigmatized behavior are portrayed as White.

Unsympathetic, “Black” racialized framings of crack-cocaine

Much of the literature on drug use focuses on the racialized impact of the “War on Drugs,” a punitive policy response to crack-cocaine, which was disproportionately used by urban minorities. Unlike the opioid crisis, the crack-cocaine crisis led to the incarceration of millions of African Americans (Alexander 2010; Bobo and Thompson 2006; Collins 2019; Murch 2015; 2019; Neill 2014; Provine 2007; 2011; Reinarman and Levine 1997). A central tenet of this punitive policy regime was a mandatory minimum sentence of five years in prison for the possession of small amounts of crack-cocaine (Coyle 2002; Provine 2011). Media coverage of cocaine use at the time focused on crack- rather than powder-cocaine, and often depicted Black
addicts in an unsympathetic light, linking their drug use to involvement in other crimes. The use of pictures and dramatic visuals heightened the vividness of these media portrayals, potentially enhancing their influence (Orcutt and Turner 1993; Reinerman and Levine 1989).

Some studies suggest that such racialized depictions of crack-cocaine influence public opinion about drug policy, making racially-resentful Whites more supportive of harsh punishments. For example, observational research shows that White Americans’ support for punitive policy responses to crack-cocaine was partly associated with their racial resentment (Lee and Rasinski 2006). Similarly, a survey experiment found that racially-biased White respondents were more likely to support harsh punishment for crack-cocaine when told that most crack-cocaine users are Black and most powder-cocaine users are White, relative to a control (Bobo and Johnson 2004, 169). However, existing research does not test the effects of sympathetic vs. unsympathetic coverage of Black vs. White drug users, with all else held constant.

**Sympathetic “White” racialized framings of opioids**

By contrast to the crack crisis, news media frames opioid abuse by focusing on White users. For example, 94% of opioid users in Pennsylvania news stories were White (McLean 2017, 418). In a more comprehensive content analysis, Netherland and Hansen (2016) find that

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7 These findings result from content analysis of major newspapers and magazines (Hartley and Miller 2010; Hartman and Golub 1999; Reeves and Campbell 1994; Reinerman and Levine 1989).

the news portrays prescription-opioid abuse largely as a crisis afflicting White Americans (666). This White ‘face’ of the opioid crisis has historical roots. As Murch notes, “drug sales representatives directed [opioid] advertisement to overwhelmingly White suburban and rural areas to avoid the stigma of racially coded urban drug markets” (2019, 6).

To be sure, the White ‘face’ of opioid abuse has a basis in reality. Opioid abusers are in fact disproportionately White. For example, 78% of Americans who died of opioid overdoses in 2017 were non-Hispanic Whites, versus 54% of the U.S. adult population (Kaiser Family Foundation 2018). However, in some recent years, the mortality rate from drug use increased more among African Americans than White Americans (Collins 2019; Frakt and Monkovic 2019; James and Jordan 2018; Katz and Goodnough 2017; Lopez 2017; Spencer et al. 2019). Whether or not the media’s framing is accurate, its messages tend to paint opioid abuse as a problem for White Americans.

Furthermore, when the media frames opioid abuse with a White ‘face’, it also tends to use a positive valence. By contrast, the ‘Black’ frame often carries negative overtones. Coverage of White prescription opioid abuse describes it with such phrases as “a tragic waste of human potential,” while heroin abuse is more often portrayed as criminalized behavior characteristic of “urban minorities” (Netherland and Hansen 2016, 670). As Pennsylvania news coverage changed its depictions of opioid users from mostly nonwhite to White, its themes

9 While White frames of opioid use often carry a positive valence, not all White-focused coverage of drug use is sympathetic. For example, coverage of methamphetamines in the early 2000s framed it as a problem afflicting rural Whites who were often described pejoratively (Cobbina 2008; Linneman and Wall 2013; Tunnel 2004).
changed from “derogatory” to “sympathetic” (McLean 2017, 417). Similarly, LDA topic models comparing national news articles about crack-cocaine (1988-1989) and opioids (2016-2017) found that the most common topics were “law and order” and “community and home,” respectively (Shachar et al. 2020, 229).

This valenced coverage may shape attitudes. McGinty et al. (2015) test the effects of randomized vignettes about White female drug users as “untreated” (negative valence) or as “seeking treatment” (positive valence). Respondents were less likely to seek social contact with the untreated person. Another randomized vignette experiment similarly finds an impact of valence on stigma toward opioid users (Goodyear, Koffler, and Chavanne 2018). Stigma against opioid abuse is in turn observationally linked with punitive policy responses (Kennedy-Hendricks et al. 2017). In line with the positive valence in media coverage, levels of stigma against opioid users are quite low, as is support for punishment. Most Americans believe “opioid use is an illness,” while only one-third believe it is a “personal weakness” (Blendon and Benson 2018, 408). Two-thirds believe opioid users should be “placed in a treatment program without jail time” and policy makers should “prioritize improving access to treatment”; only one-quarter think they should “serve jail time” or favor “stricter punishment and enforcement” (Blendon and Benson 2018; see also APA 2018). Support for treatment is high among various partisan and geographic groups, and not limited to people who know opioid users (Cook and Brownstein

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10 Valence was manipulated with “drug addict” versus “opioid use disorder” and with obtaining drugs from “friends” versus “a prescription.”
These studies imply that favorable coverage may lead to sympathy and support for treatment policy, while unfavorable coverage prompts the opposite. However, they do not test these hypotheses experimentally. Nor do they vary the race of drug users. One recent study varies the race of opioid users (Wood and Elliot 2019), but does not vary valence, nor examine opinion on policy.

Taken together, this research suggests coverage of opioid abuse features sympathetic White users who deserve treatment. It implies coverage thereby increases sympathy for users and support for public health policy over punishment. This further implies that coverage of drug abuse that does not highlight both a positive and a White frame does not elicit support for government assistance. However, to date, these propositions have not been subjected to a causal test.

**Hypotheses: The impact of valence and racial framings**

To test these expectations, we constructed a hypothetical newspaper story about opioid abuse, varying the race of the users (Black or White) and the valence of the frame (sympathetic or unsympathetic) (Table 1). The design is further described below. We compare these conditions to one another and to a no-story control, guided by the following hypotheses.

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11 It is higher among Democrats, people who know opioid users, and residents of areas with high overdose rates. However, support is high among the other groups.

12 The study finds greater social stigma toward *White* than Black opioid users (4). It also varies gender (male vs. female), and class (working-class vs. middle-class). In Gollust and Miller (2020), both treatments present opioids as a ‘White’ problem and valence is not manipulated.
Table 1: Treatments

<table>
<thead>
<tr>
<th>Race: White</th>
<th>Valence frame: Sympathetic</th>
<th>Valence frame: Unsympathetic</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1: Sympathetic White (SW)</td>
<td>T2: Unsympathetic White (UW)</td>
<td></td>
</tr>
<tr>
<td>Race: Black</td>
<td>T3: Sympathetic Black (SB)</td>
<td>T4: Unsympathetic Black (UB)</td>
</tr>
</tbody>
</table>

Control condition = No story (C)

**Valence**: Framing studies predict that favorable coverage generates sympathy for opioid users, and unfavorable coverage generates antipathy. More specifically, the *sympathy hypothesis* predicts that favorable coverage increases sympathy and support for treatment, regardless of target race (C < T1, T3). By the same logic, the *antipathy hypothesis* predicts that unfavorable coverage increases antipathy and punitiveness, regardless of target race (C > T2, T4). Finally, the *full valence hypothesis* predicts that favorable coverage produces more sympathy than unfavorable coverage, within each racial condition (T1 > T2, and T3 > T4).  

**Racialization**: The valence hypotheses ignore the role of race. Yet racialization theories argue the racial ‘face’ of the coverage matters. First, these theories emphasize that racial bias is the result of long-term, cumulative exposure to anti-Black and pro-White messages. This cumulative association of sympathy and race will outweigh the effect of one counter-stereotypical story. Thus, *Anti-Black bias* predicts Black addicts receive little sympathy from the sympathetic story (T3 = C). By the same token, *Pro-White bias* predicts White addicts elicit little antipathy from an unfavorable story (T2 = C). These are the mathematical null hypotheses for the valence predictions. Furthermore, *racial sympathy* predicts that favorable coverage generates more positive responses when featuring White than Black users (T1 > T3), and *racial antipathy*

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13 The no-story condition may be an inadequate baseline because prior coverage has already constructed addicts favorably. Comparing favorable and unfavorable treatments avoids this problem and tests the full range of the treatments.
predicts the reverse for unfavorable coverage (T2 > T4). In addition, the *racial main effect hypothesis* predicts that the combined White conditions will generate more positive outcomes than the combined Black conditions (T1 + T2 > T3 + T4).

Finally, theories of racial bias predict that racial effects will vary by racial predispositions, such as resentment, stereotypes, or White identity (*racial moderator hypothesis*). This expectation builds on a large literature showing that the race of the actor in a stereotypical media story activates Whites’ racial attitudes and increases their support for punitive policy responses and candidates who advocate for these policies (Gilliam and Iyengar 2000; Gilliam, Valentino, and Beckman 2002; Hurwitz and Peffley 1997; Jardina 2019; Kinder and Sanders 1996; Mendelberg 2001; Peffley and Hurwitz 2010; Peffley, Shields, and Williams 1996; Tesler 2012; Tesler and Sears 2010; Valentino 1999; Valentino, Hutchings, and White 2002). Respondents with high levels of White identity or negative racial predispositions will react more negatively to the Black-target conditions and more positively to the White-target conditions. As a placebo test, we test the *ideological null hypothesis*, that the racial condition effects will not be moderated by political ideology or partisanship when accounting for racial predispositions.

**Experimental design and methods**

To test these hypotheses, we conducted two randomized between-subjects survey experiments, on two samples. The main sample consists of 1,517 White American adults from the NORC Amerispeak Panel, a national probability-based sample.\(^{14}\) The other sample is from

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\(^{14}\) The NORC sample was fielded in July 2020 and funded by Time-sharing Experiments in the Social Sciences.
the survey firm Dynata, and is described below. This research was preregistered. The experiments use the same basic design from Table 1. After answering standard pre-treatment questions, each participant was randomly assigned to one of four treatments or a non-story control. In the treatments, respondents read a hypothetical news story varying the race of drug users (White or Black) and the valence of the frame (sympathetic or unsympathetic). The story draws on actual news stories and their reader commentaries, and, importantly, resembles them in length, narrative style, and the use of vivid photos (Trent and Robertson 2018; Winnefeld 2017). This full-length narrative format generalizes to the type of news content many people consume. It represents an advance over many studies where information is stylized, abbreviated, and lacks imagery, with stimuli too pallid to allow the full development of a frame.

The news story begins with statistics about opioid use. Next, it presents the personal account of a fictional man named Mike, recounting how he began using opioids and the impact of drug use on his life. To vary valence, the article alters who is to blame for the crisis (“drug companies” vs. “careless patients”), how Mike and other users first obtain opioids (“legal” vs. “ill-obtained”), whether Mike had previously been a drug user, how severely Mike’s addiction affected those around him, and whether Mike and other users are responsible for the fallout from

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15 Sample sizes are based on power calculations. To calculate power for the main study, we assumed an effect size of 0.12, a baseline mean of 0.4, standard deviation of 0.3, alpha of 0.05, and power of 0.80. With five conditions crossed by terciles of racial predispositions, we require 98 respondents per cell, summing to 1,470 respondents.

16 An anonymized pre-analysis plan is available upon request.

17 Age, region, education, gender, income, partisanship, and ideology.
addiction. To vary race, the article alters Mike’s race and the racial group most affected by opioid use. We do so with the phrase “rural town” or “inner-city,” and a photo of an otherwise identical White or Black “Mike.”\(^{18}\) See Appendix Figure A1.

Post-treatment outcomes in the main survey include support for government-funded treatment over arrest; willingness to pay taxes for treatment programs (a strong form of treatment support); support for a candidate who advocates treatment over arrest; and emotional reactions to drug addicts (Banks 2014). Both surveys end with manipulation checks and racial predispositions measures.\(^{19,20}\) All variables will be described below.

**Manipulation checks and mechanisms**

To test mechanisms and validate the treatments, we recruited 336 White American respondents through the firm Dynata. We used quotas to obtain a nationally representative sample on standard demographics. We randomized respondents to one of seven conditions: the five conditions described above, and two “no-race” conditions.\(^{21}\) The outcome variables measure perceptions and emotions regarding addicts. Variables are coded 0 to 1, from least to most

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\(^{18}\) We are guided by the “race as a bundle of sticks” framework and existing content analyses (Netherland and Hansen 2016; Sen and Wasow 2016). Mike’s photo was generated with Facegen software.

\(^{19}\) In case saturated news exposure depresses treatment effects, we also included a measure of how closely respondents followed news on the opioid crisis, discussed below.

\(^{20}\) The moderators were unaffected by treatments in the main sample.

\(^{21}\) These are sympathetic and unsympathetic versions of the news story that do not attribute a race to opioid addicts.
sympathetic, unless otherwise noted. Plots display raw means and 83% confidence intervals, the graphical equivalent to \( p < 0.05 \) (Frost 2019; Goldstein and Healy 1995).

We begin with valence effects. First, we asked, “How sympathetic was the portrayal of opioid use in the news article that you just read?” The five-point response ranges from “Very unsympathetic” to “Very sympathetic.” As expected, the sympathetic and unsympathetic conditions yield different ratings: 0.70 (corresponding to “sympathetic”), and 0.51 (“neither sympathetic nor unsympathetic”).22 That is, the valence treatments produce very different ratings, as intended. However, while sympathetic stories of opioid addicts are seen as sympathetic, unsympathetic coverage is perceived as neutral. This asymmetric perception is a substantively informative finding, suggesting the dominance of sympathetic frames.23

In addition, the valence conditions move emotional responses to “drug addicts” in the expected direction (see Appendix Figure A2).24 Compared to the no-story control, unsympathetic conditions produce more anger and fear, while the sympathetic conditions only produce fear. Similarly, the sympathetic conditions produce more sympathy and pity, while the unsympathetic conditions do not.25 Finally, the two valence treatments differ significantly on nearly every one

\[ (p < 0.001) \]

22 Additionally, in the NORC sample, we asked “how much sympathy do you feel for Mike”. Valence substantially affects the response, by 19 percentage points (see Appendix p. 8 and Table A1 for coding and results).

24 The emotions items in the Dynata study are not sufficiently correlated to scale into a single index. See Table 2 for wording.

25 Neither has significant effects on compassion.
of these emotions. The valence conditions thus produce opposing emotional responses. This finding too is of substantive importance: news stories cause emotional reactions to drug abuse.\textsuperscript{26}

However, these feelings are not entirely race neutral (see Appendix Figure A3). The pooled Black conditions significantly increase anger, whereas the White conditions do not. The pooled White conditions significantly increase pity and sympathy, whereas the pooled Black conditions do not.\textsuperscript{27} In addition, the no-race conditions resemble the White conditions on pity and sympathy. This last finding suggests that cumulative exposure to the White face of the epidemic has created an association between opioid abuse, Whites, and sympathy that does not require direct references to Whites to be activated. In all, these findings suggest the specific emotion of sympathy for drug addicts is less readily forthcoming for Blacks.\textsuperscript{28} Sympathy is a racialized feeling when it comes to drug addiction.

The racial frame not only shapes feelings; it also racializes perceptions. Mike’s race was perceived correctly by nearly every respondent in both the White and Black conditions.\textsuperscript{29} In

\footnotesize{\textsuperscript{26} The effect of valence replicates with the main sample, as explained further on.\textsuperscript{27} Black and White treatments differ from each on feelings of sympathy at $p = 0.08$. They do not differ significantly from each other on anger, disgust, fear, pity or compassion.\textsuperscript{28} White identity and racial stereotypes do not moderate the racial effects on emotional outcomes. We do not present the moderating effects of racial resentment because it is affected by the sympathetic White treatment.\textsuperscript{29} “Mike” perceived as White: 97\% in the White conditions, 6\% in the Black conditions. “Mike” perceived as Black: 93\% in the Black conditions, 1\% in the White conditions. Response options are “White or Caucasian,” “Black or African American,” “No race,” “Not sure.”}
addition, when Mike’s race is unstated, most respondents assume it is White. Specifically, in the no-race conditions, 52% believe Mike is White, and only 6% believe he is Black. These results are consistent with the long-term effect of the ‘White face’ of opioid abuse on perceptions of opioid addicts as White.\(^{30}\)

To further assess racial perception, we asked, “When you think about opioid addicts, what percentage would you guess are White, Black, or of another race? For comparison, 64% of the U.S. adult population is White, 12% is Black, and 24% is of another racial group.” We coded the open-ended responses into two binary variables: over-estimating Whites and over-estimating Blacks. As Figure 1 shows, most respondents’ perception aligned with their assigned story, differing considerably by treatment. In the White conditions, 55% over-estimated the White percentage, compared to 40% in the control and 17% in the Black conditions. The treatments also affected the Black percentage as expected.\(^{31}\) Finally, the no-race conditions fall about halfway in between. This far into the opioid epidemic, many believe opioid addicts are White. Yet news stories can greatly affect perceptions of opioid addicts’ race, suggesting the White ‘face’ is partly constructed in the media.\(^{32}\)

\(^{30}\) This informs our decision to omit the no-race conditions from the main study. They would not make for a clear nonracial baseline.

\(^{31}\) The racial perception effects replicate in the main study (Appendix Table A2).

\(^{32}\) The Dynata study also included the same perception question about “drug addicts.” Those responses are not affected, except the Black treatment reduces over-reporting of White addicts. That is, respondents generalize their racial perception from “opioid” to “drug” addicts only when the story is about Blacks. Results available upon request.
Main experimental results

**Table 2: Outcome variables**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Question</th>
<th>Coding</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Treatment policy</strong></td>
<td>“Do you think drug addicts should be arrested for violating drug laws, or offered government-funded treatment?”</td>
<td>A binary variable, 0 = favoring arrest, 1 = favoring treatment</td>
</tr>
<tr>
<td><strong>Treatment candidate</strong></td>
<td>“How likely would you be to vote for a political candidate who advocates for government-funded drug treatment programs over arresting drug addicts for violating the law?”</td>
<td>A five-point variable ranging from “extremely unlikely” (0) to “extremely likely” (1)</td>
</tr>
<tr>
<td><strong>Taxes for treatment</strong></td>
<td>“Regardless of how you answered the prior question, how much money in extra taxes would you personally be willing to pay for government-funded treatment programs?”</td>
<td>A six-point variable ranging from “$0” (0) to “$300 or more” (1)</td>
</tr>
</tbody>
</table>
| **Emotions towards drug addicts** | “Which of the following emotions, if any, do you feel towards drug addicts?”  
    [Anger, fear, disgust, sympathy] | Eleven-point scales ranging from “I don’t feel this emotion” (0) to “I feel this emotion strongly” (1). Anger, fear, and disgust are reverse coded and averaged with sympathy into a four-item index ranging from most negative (0) to most positive (1), alpha = 0.67 |

33 These emotions, along with compassion and pity, are also in the Dynata study.
Next, we turn to the main study. We designed it to test the effects of the treatments on four measures: three political outcomes (treatment policy, candidate, and taxes), and a scale of emotions (Table 2). All variables are coded from 0 to 1, with higher values indicating support for treatment or sympathy for addicts, unless noted otherwise. Across conditions, respondents were generally supportive of treatment over arrest, favored a candidate who supports such policies, and expressed moderately positive emotional responses towards drug addicts, but most were unwilling to pay increased taxes for treatment programs. Appendix Figure A4 displays these raw means, to provide a descriptive look at the data.

Next, we regress each of the four outcomes on treatment indicators and pre-treatment covariates (age, region, education, gender, income, partisanship, and ideology). We use logistic regression for the binary outcome (treatment policy), and OLS otherwise.

Figures 2-4 display the average treatment effects, in percentage points. We start with the valence hypotheses, sympathy and antipathy (Figure 2). Compared to the no-story control, favorable coverage should generate support for opioid addicts, and unfavorable coverage should do the opposite, for each target race. As the sympathy hypothesis predicts, the sympathetic White condition increases support by statistically and substantively significant amounts, on three of the four outcomes: treatment policies (21 points), a candidate who favors treatment (8 points), and sympathetic emotion (4 points). Likewise, the sympathetic Black condition increases support, for

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34 Partisanship and ideology are standard seven-point scales coded continuously when used as controls. Results are unchanged with tercile categories (available upon request).

35 These are extracted from regression results in Appendix Tables A3-A9. Regressions use the 7 equations in Appendix p.7.
all four outcomes: treatment (13 points), candidate (6 points), taxes (5 points), and emotions (5 points). Overall, the strongest of these effects are on policy and candidates, and the weakest are on taxes and emotion.

Figure 2: Comparing each treatment to the no-story control

Estimates are percentage point marginal effects from Logit (for policy) or OLS models, with 95% CIs. Models control on demographics, party, and ideology.

However, the second valence hypothesis – antipathy – is not supported. Specifically, the unsympathetic White and Black conditions each affect only one outcome – emotions – and only mildly (Figure 2). Sympathetic stories are powerful, while negative stories make no difference.

We test the final, full valence hypothesis by comparing the valence conditions to each other, within each racial frame (Figure 3). As predicted, relative to the unsympathetic White condition, the sympathetic White condition generates strong, statistically significant support, on three of the four outcomes: policy (18 points), candidate (7 points), and emotion (8 points). In addition, relative to the unsympathetic Black condition, the sympathetic Black condition
increases support for policy (8 points) and emotions (8 points). Favorable coverage produces more sympathetic responses than unfavorable coverage.

*Figure 3: Comparing sympathetic to unsympathetic treatments within race (Full valence)*

![Graph showing comparison of sympathetic and unsympathetic treatments within race for policy, candidate support, taxes for treatment, and sympathetic emotional response.](image)

Estimates are percentage point marginal effects from Logit (for policy) or OLS models, with 95% CIs. Models control on demographics, party, and ideology.

Next, we test the racialization hypotheses. As already seen in Figure 2, the **Anti-Black hypothesis** is not supported. Specifically, the sympathetic story about Black addicts increases support for all four outcomes. That is, racial bias does not erase the effect of a sympathetic portrayal of Black addicts. In addition, as the **Pro-White hypothesis** predicts, the unsympathetic White treatment has no significant effects on outcomes (except emotions). However, neither does the Black unsympathetic story (Figure 2). White respondents do respond positively to sympathetic portrayals of Black drug use.

However, they do not respond to portrayals of Blacks and Whites equally. The **racial sympathy hypothesis** receives some support, as seen in Figure 4. Specifically, the sympathetic condition generates less support for treatment policy with Black than White addicts. The deficit
is 8 points, statistically and substantively significant. That is, White respondents’ policy views exhibit racial bias. The other three outcomes show no racial effects. In addition, there is no evidence for the racial antipathy hypothesis: unsympathetic coverage does not generate more antipathy with Black than White addicts (Figure 4). Taken together, these results point to the importance of racial sympathy in policy views. In the contemporary opioid crisis, racial bias is caused specifically by a weaker response to sympathetic coverage of Blacks.

Finally, to test the racial main effect hypothesis, we compare the pooled Black and pooled White conditions. As Figure 4 shows, this hypothesis is generally not supported. While the Black conditions decrease support for treatment policy by about 5 percentage points, this effect is somewhat uncertain (p < 0.10). For the remaining outcomes, the effects are substantively and statistically insignificant. Racial bias manifests clearly only with sympathetic coverage.

36 As noted earlier, the Dynata analysis found suggestive support for the racial main effect hypothesis on the specific emotion of sympathy.

37 We also conducted a CACE analysis (Appendix, pp. 16-18). Compliers are respondents who over-estimated the racial group in their assigned racial treatment, using variables described above. Overall, the CACE and ATE racial main effects are similar. However, the racial sympathy CACE is much larger than the ATE, on treatment policy. Thus, perceiving a disproportionate racial impact of the opioid crisis helps explain the effect of the racial sympathy frame. The racial sympathy CACE was not preregistered, so we do not put much weight on it.

38 The racial main effect on policy is stronger among respondents with low prior opioid news exposure, a group less likely to have already been “treated” by opioid news saturation (White -
Figure 4: Comparing White and Black treatments (Racial hypotheses)

Estimates are percentage point marginal effects from Logit (for policy) or OLS models, with 95% CIs. Models control on demographics, party, and ideology.

These results lead to several conclusions. First, sympathetic stories increase support for addicts, while unfavorable coverage rarely matters. That is, respondents have sympathetic baseline opinions that can be made more – but not less – sympathetic. This is consistent with the cumulative effects of sympathetic coverage. Second, coverage strongly affects policy and candidate support, but rarely changes willingness to spend more in taxes. Sympathy has its limits at concrete costs. Finally, the positive effect partly varies by target race. The sympathetic White

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Black = 10 points, p < 0.05). Low exposure does not consistently affect any other treatment effects (see Appendix p. 18).
story produces more support for treatment policy than its Black counterpart. Sympathetic frames do matter for Blacks, but not as strongly as for Whites.\textsuperscript{39}

\textit{Moderating effects of racial predispositions}

The racial ‘face’ of drug users may matter more for those with more negative racial predispositions. To test this \textit{racial moderator hypothesis}, we re-estimate the regressions, now including interactions with three racial predispositions in turn: \textit{racial resentment, White identity, or racial stereotypes}. Each is used in a separate model.\textsuperscript{40}

\textsuperscript{39} We did not measure personal opioid abuse because it is not the focus of this research and would be severely under-reported. Instead, we test whether valence is moderated by state-level opioid mortality rate, a proxy for personal experience. Valence effects are not consistently moderated by this variable (results available upon request). This analysis was not preregistered.

\textsuperscript{40} \textit{Racial resentment} is an index of two Likert items: (1) “The Irish, Italians, Jews, and many other minorities overcame prejudice and worked their way up. Blacks should do the same without any special favors” (2) “Generations of slavery and discrimination have created conditions that make it difficult for Blacks to work their way out of the lower class” (reversed). \textit{White Identity} is a five-point item: “As you know, people have different identities. They think of themselves as Black, White, etc. We would like to ask you how you think about yourself. How important is being White to your identity?” \textit{Racial stereotypes} subtracts a seven-point rating of “Whites” from that of “Blacks” on ‘lazy’ vs ‘hard-working’. We use terciles for racial resentment and for White identity, and a median split for racial stereotypes because it lacks sufficient variation. The bottom category is the omitted baseline. Binning continuous variables is best practice for interaction models (Hainmueller, Mummolo, and Xu 2018). As another
Appendix Tables A10-14 present the regression results. They show significant interaction effects for racial stereotypes and racial resentment, on several outcomes. First, high-stereotype respondents are more prone to selective *racial sympathy*: Treatment policy gets less support with the sympathetic Black than White ‘face’ among those in the top half of the stereotype distribution (Appendix Table A11). By the same token, unfavorable coverage elicits less policy support with a Black than White ‘face’ among those high in racial stereotypes, in line with *racial antipathy* (Appendix Table A13). These two effects add up to a *racial main effect* from Black (vs. White) coverage among Whites who endorse the view that Blacks are lazier than Whites (Appendix Table A14). However, this *racial main effect* is driven by sympathetic coverage, as Figure 5 shows. Figure 5 displays the magnitude of these effects, separately for high and low stereotypes. While the Black “face” of sympathetic coverage loses no policy support from low-stereotype respondents, it loses 37 points from high-stereotype respondents. To be

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advantage, terciles make these variables categorical and thus equivalent to the categorical variables we will use for moderator tests with ideology and partisanship.

41 Moderator analyses use all models except those testing the full valence hypothesis, as it is not relevant.

42 They uncover no statistically significant interactions for White identity.

43 Racial stereotypes do not moderate valence effects (*sympathy or antipathy*), nor the *Pro-White bias* or *Anti-Black bias* effects.

44 Figures 5 and 6 are based on regressions estimated separately on the top and bottom subsets. Thus, they may show slightly lower significance levels than the interaction models. Regressions for figures are available upon request.
sure, those who stereotype also exhibit a *racial antipathy* effect. However, their racial antipathy effect is less than half the size of their racial sympathy effect. While these sympathy and antipathy effects cumulate to an overall *racial main effect* on high-stereotype respondents, the 2:1 ratio of sympathy to antipathy effects points to the particular role of racially-selective sympathy. Taken together, these results show that selective racial sympathy is located entirely among those with negative views of Blacks’ work ethic. Policy leans more heavily toward treatment when addicts are portrayed with a sympathetic White ‘face’, because this portrait appeals to Whites with relatively negative views of Blacks’ character.

*Figure 5: Comparing Black and White treatments (Racial hypotheses, by racial stereotype)*

![Graphs showing comparisons](image)

*Estimates are percentage point marginal effects from separate Logit (for policy) or OLS models models on the top and bottom halves of negative Black-White stereotypes, with 95% CIs. Models control on demographics, party, and ideology.*
We find further support for selective *racial sympathy* when turning to racial resentment. Resentment weakens the impact of sympathetic Black coverage, on candidate support and taxes (Appendix Table A11). That is, respondents who hold Blacks responsible for their unequal situation are more affected by the racial face of sympathetic coverage.\(^{45}\) Figure 6 shows this pattern more clearly. As Figure 6 shows, low-resentment respondents experience no racial treatment effects, on any outcome. By contrast, those who blame Blacks’ work ethic and deny Black’s disadvantage exhibit *racial sympathy* effects on policy, candidates, and taxes.\(^{46}\) Again, the racially-selective sympathy effect largely drives the overall racial main effect.

\(^{45}\) This racial sympathy effect carries over to a *racial main effect* (Appendix Table A14). The racial main effect is statistically significant on candidate support, and \(p = 0.052\) for taxes. Racial resentment does not moderate valence effects or motivated racial effects, much like stereotypes.\(^{46}\) The interaction effect on policy is not statistically significant (Appendix Table A11), but the effect is substantively and statistically significant for high-resentment respondents and not for low-resentment respondents.
Estimates are percentage point marginal effects from separate Logit (for policy) or OLS models on the top and bottom terciles of racial resentment, with 95% CIs. Models control on demographics, party, and ideology.

In sum, Whites who hold racial stereotypes or resentment offer more political support with sympathetic stories about White than Black opioid addicts. Furthermore, selective sympathy is entirely explained by negative racial predispositions. Only high-stereotype respondents give less policy support when shown a Black than White ‘face’ of opioid abuse. Only high-resentment respondents offer less support for policy, candidates, and taxes with a Black ‘face’.47

47 Neither of these racial predispositions moderates treatment effects on emotions, suggesting that racial predispositions affect how Whites translate news stories into political views rather than more general attitudes.
**Moderating effects of political ideology and partisanship**

Finally, while these moderator effects support theories of racialization, they do not rule out the alternative explanation: Racial coverage may also be moderated by political ideology and partisanship. Specifically, the *ideological null hypothesis* predicts the racial treatment effects are not moderated by political ideology or partisanship. To test it, we switch the racial predisposition interactions with ideology or partisanship interactions (Appendix Tables A15-19). The results largely support this ideological null hypothesis, with one exception: The Black ‘face’ of *racial sympathy* affects conservatives more than liberals regarding taxes (Appendix Tables A15-16). That is, conservatives are more reluctant than liberals to pay increased taxes for treatment when exposed to sympathetic Black portraits. Otherwise, ideology and party have no consistent moderating effects.

**Conclusion**

Given the staggering scale of opioid abuse, it is important to understand what shapes opinion on this pressing public health problem. According to existing studies, the sympathetic, White ‘face’ of news about opioid abuse helps explain the widespread support for treatment over punishment. To our knowledge, however, this hypothesis has not been investigated with randomized experiments. Can media frames shift policy views from an emphasis on punishing crime to a focus on supporting public health? Does sympathetic coverage affect policy preferences primarily when it focuses on Whites? To date, we do not know if racial and valence frames have a causal effect on attitudes towards opioid policy. To test these hypotheses, we

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48 We use the standard three categories of partisanship and ideology, with Democrat or liberal as the baseline, respectively. These models control on racial predispositions.

49 Relative to the control and sympathetic White condition.
varied the racial ‘face’ of opioid abuse and directly randomized the mediating variable of sympathy. We used ecologically valid treatments in two samples, including a large population-based sample. The analyses were preregistered in detail.

First, sympathetic frames increase support for treatment policy and for candidates who favor it. In contrast, unsympathetic frames have no effect. This may be because opioid abuse is already established as a sympathetically valanced problem in the eyes of many White Americans. In any case, it points to the asymmetry of sympathy and antipathy.

Second, sympathetic frames increase political support even when featuring Blacks, but they matter most when they focus on Whites. In line with studies of racialization, media frames shape public opinion along a gradient of racial hierarchy. Unlike existing studies, which focus on negative constructions of disadvantaged racial groups, we compared negative and positive frames of advantaged and disadvantaged racial groups (Gilens 1999; Mendelberg 2001; Valentino 1999). We find that racialized media frames affect support for generous policy responses for a problem with sympathetic and deserving victims. Selective racial sympathy is a neglected but important aspect of public discourse.

Third, media has a causal impact on public health views. Support for treatment policies and candidates rises with exposure to sympathetic frames. This suggests media framings of opioid abuse help explain the high support for treatment-oriented policy responses.

Because it investigates the racialized responses of an advantaged racial group, this study focused on White respondents. However, the experimental design could be applied to racial minorities as well. The effects of frames on political views in different racial groups may diverge, and warrant further research.
This research contributes to literatures on media frames, racial attitudes, the public definition of crisis, and views of public health. It also has policy implications, as public opinion may shape government responses. Opioid use is currently framed sympathetically, as a public health issue that affects deserving White victims rather than Black “criminals.” This gives policymakers the ability to focus on treatment, as opposed to the punitive approaches that have long dominated American drug policy. However, if the media portrays opioid use as increasing among African Americans and Latinos, public support for government-funded opioid treatment may decline. More generally, the study implies that support for public health measures is highly susceptible to the media construction of the affected population.
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