



## Examining Racial Disparities in Drug Arrests

Ojmarrh Mitchell & Michael S. Caudy

To cite this article: Ojmarrh Mitchell & Michael S. Caudy (2015) Examining Racial Disparities in Drug Arrests, Justice Quarterly, 32:2, 288-313, DOI: [10.1080/07418825.2012.761721](https://doi.org/10.1080/07418825.2012.761721)

To link to this article: <https://doi.org/10.1080/07418825.2012.761721>



Published online: 22 Jan 2013.



Submit your article to this journal [↗](#)



Article views: 8026



View related articles [↗](#)



View Crossmark data [↗](#)



Citing articles: 66 View citing articles [↗](#)

# Examining Racial Disparities in Drug Arrests

*Ojmarrh Mitchell and Michael S. Caudy*

The War on Drugs popularized a set of policies and practices that dramatically increased the number of drug arrests, particularly for low-level drug offenses. The War's tactics have affected Americans of every race; however, minorities have been most dramatically affected. There are several explanations for the observed racial disparity in drug arrests, but relatively little research directly tests these explanations. In this study, we test three common explanations of racial disparities in drug arrest rates. We find that racial disparities in drug arrests cannot be explained by differences in drug offending, nondrug offending, or residing in the kinds of neighborhoods likely to have heavy police emphasis on drug offending. Our findings are most consistent with explanations focusing on racial bias in drug sanctions.

*Keywords* race and drug offending; race and crime; drug offending; racial crossover

In the mid-1980s, the USA launched a new drug war, which unlike previous American drug wars relied heavily on punitive criminal justice sanctions. Proponents of such policies claimed that these policies were necessary to “ensure that all drug users” would face the risk of criminal sanctions (Office of National Drug Control Strategy [ONDCP], 1989, p. 18, our emphasis). Yet, a sizeable body of research using aggregate data finds that all drug users do not have an equal likelihood of facing criminal sanctions; instead, minorities have

Ojmarrh Mitchell is an associate professor in the Department of Criminology at the University of South Florida. Professor Mitchell earned his PhD in Criminal Justice and Criminology from the University of Maryland with a doctoral minor in Measurement, Statistics, and Evaluation. His research interests include drugs and crime, race and crime, corrections and sentencing, and meta-analysis. Michael S. Caudy is a postdoctoral research fellow at the Center for Advancing Correctional Excellence (ACE!) in the Department of Criminology, Law & Society at George Mason University. His primary research interests include correctional interventions for justice-involved individuals with substance use, mental health, and co-occurring disorders; evidence-based community corrections; and the relationship between race, crime, and criminal justice sanctioning. Correspondence to: O. Mitchell, Department of Criminology, University of South Florida, 4202 E. Fowler Ave, SOC107, Tampa, FL 33620, USA. E-mail: [omitchell@usf.edu](mailto:omitchell@usf.edu)

higher risks of drug sanctioning than whites (see e.g. Blumstein, 1993; Golub, Johnson, & Dunlap, 2007; Goode, 2002; Human Rights Watch, 2008, 2009; Tonry, 1995). This body of research attributes minorities' higher probability of drug arrest to their higher rates of drug use, greater involvement in drug distribution, and/or greater likelihood of residing in neighborhoods characterized by strict drug enforcement. Aggregate data, however, are incapable of empirically testing whether these factors *combine* to account for race differences in drug arrest—individual-level data is needed for such an assessment. The purpose of the current research is to test, at the individual level, whether racial/ethnic disparities in the probability of drug arrest can be explained by a combination of factors such as racial/ethnic differences in drug use, drug sales, nondrug offending, and/or minorities' greater presence in high-crime neighborhoods.<sup>1</sup>

## The War on Drugs

In a nationally televised address given in September of 1986, President Reagan and Nancy Reagan urged Americans to join the “great, new national crusade” against drugs and “help us create an outspoken intolerance for drug use” (Reagan, 14 September 1986). This plea combined with the passage of the Anti-Drug Abuse Act one month later launched the “War on Drugs.” This drug war fundamentally changed US drug policy in two ways (Baum, 1996; Boyum & Reuter, 2005). First and foremost, the focus of drug control was expanded from international efforts at drug crop reduction, interdiction at the borders, and apprehension of major drug traffickers to now include mid- and low-level dealers and even drug users. Second, the War on Drugs sought to discourage drug use and involvement in the drug trade primarily by utilizing punitive criminal justice sanctions, instead of alternative drug control mechanisms (e.g. drug use prevention, drug treatment, harm reduction). Herein, we use the term “the War on Drugs” to refer to this punitive shift in American drug control policy and to distinguish its drug control strategies from previous drug wars.<sup>2</sup>

Much has been written and said about the long and often mandatory prison sentences that have become the hallmark of the War on Drugs. Yet, this focus

1. Hereafter, for parsimony we use the term “race” to refer to both race and ethnicity.

2. It is important to note that the USA has fought several earlier wars against drugs. Perhaps most notably, President Nixon launched a drug war in the late 1960s. President Nixon's drug war was different as it emphasized international efforts at crop eradication, the apprehension of high-level drug dealers, and drug treatment (Boyum and Reuter, 2005). Under President Nixon, methadone treatment centers were opened across the country and a majority of federal drug control funds were spent on drug treatment (Goode, 2007; Musto, 1999). President Reagan also attempted to launch an earlier drug war aimed largely at marijuana. For example, Reagan famously said in June of 1982 “[W]e're running up a battle flag. We can fight the drug problem, and we can win.” Notably, the only specific drug mentioned in this speech was marijuana (Reagan, 1982). This early campaign against drugs did not resonate with lawmakers and led to relatively few policy changes. It was only after crack cocaine gained notoriety in the mid-1980s that Reagan's attempt to engage in a “new” drug war escalated into what we refer to as the “War on Drugs.”

on drug sentencing obscures an equally important change in drug control strategy—the massive increase in drug arrests, especially for low-level drug offenders. The architects of the War on Drugs touted the utility of arresting even minor drug offenders as a means to suppress drug use. The first National Drug Control Strategy explained this philosophy unambiguously:

To prevent people from using drugs, drug enforcement activities must make it increasingly difficult to engage in any drug activity with impunity ... That's why we need a national drug law enforcement strategy that casts a wide net and seeks to ensure that all drug users—whatever its scale—face the risk of criminal sanction. (ONDCP, 1989, p. 18)

As a means to this end, the Strategy argued that:

Making streets safer and drug users more accountable for their actions requires the criminal justice system to expand and reform in an unprecedented way. Effective street-level enforcement means *dramatically increasing the number of drug offenders arrested*. (ONDCP, 1989, p. 24, our emphasis)

Further, the Strategy called on states to “enact a range of penalties for persons caught using or possessing even small amounts of drugs” (p. 126) and the Anti-Drug Control Acts included billions of dollars in federal aid to states that adopted policies consistent with the federal government’s drug control philosophy.

State and local law enforcement agencies did, in fact, modify their practices to conform to the federal government’s new drug war. The best evidence of this change in drug control policy is the sharp increase in drug arrests, particularly drug possession arrests. In 1980, prior to the War on Drugs, there were approximately 581,000 drug arrests reported to the FBI; in 1989, that number more than doubled to 1,362,000 and grew further in the 1990s. The sharp rise in drug arrests was caused by an explosion in the number of drug possession arrests after the War on Drugs began. In 1986, there were 617,300 arrests for drug possession; by 2007, drug possession arrests had grown nearly 150% to 1.5 million. By contrast, the number of arrests for drug sales/manufacturing in the same period grew by a less remarkable 55%. Today, more than 25 years after the War on Drugs began, the annual number of drug arrests in the USA remains near its peak, a finding that strongly suggests that the war wages on and perhaps has become institutionalized.<sup>3</sup>

3. It is important to note that the sharp increase in drug arrests occurred in a period in which drug use was generally declining. The National Household Survey on Drug Abuse reports that among those 12 years old and older, past month illicit drug use dropped from 14% in 1979 to 12.1% in 1985; thus, drug use was dropping prior to the commencement of the War on Drugs. Drug use continued to drop after the war was declared: 7.7% of those 12 and over reported past month illicit drug use in 1988 and 5.9% reported past month drug use in 1993. Likewise, Monitoring the Future’s survey of high school seniors reveals that drug use peaked in 1979 and dropped markedly in the years preceding the launch of the War. Clearly, drug use was generally decreasing and had been for several years prior to the start of this new drug war.

## Race and the War on Drugs

Americans of all racial backgrounds have been affected by the current War on Drugs; yet, minorities, particularly African-Americans, have borne the brunt of the war (Tonry, 1995, 2011). In 1980, prior to the latest War on Drugs, the drug arrest rate for African-Americans was 554 per 100,000 and the rate for whites was 190 per 100,000—a ratio of roughly 3 to 1. Less than 10 years later, at the height of the drug war, these rates had climbed to 2,009 and 363 per 100,000 for blacks and whites, respectively (Human Rights Watch, 2009)—a ratio of 5.5 to 1. Since 1990, on average, this ratio has been approximately 4.5 to 1. Data on Hispanic drug arrests are harder to come by because the FBI's Uniform Crime Report does not record Hispanic ethnic status, but available data suggest that Hispanics are also arrested at rates considerably higher than whites. For example, in 2000, Hispanics in the state of Minnesota had a drug arrest rate of 1,720 vs. 404 for whites per 100,000 (Racial Disparity Initiative, 2002). Similarly, in 2009, Hispanics in Arizona had a drug arrest rate of 622.5 vs. 501.7 for nonHispanics per 100,000 (Males and Macallair, 2010). And, in California, Hispanics had 54% higher felony drug arrest rates and 22% higher misdemeanor drug arrest rates than whites in 1999 (Criminal Justice Statistics Center, 2000). These statistics illustrate both the tremendous growth in drug arrests and the War on Drugs' worsening effect on racial disparities in drug arrest rates.

Interestingly, when trends in drug arrests are disaggregated by age, it becomes evident that racial disparities in drug arrests since 1980 have been more extreme and more variable for juveniles than adults. In the early 1980s, prior to the latest drug war, black and white juveniles had essentially the same drug arrest rates; in fact, white juveniles had a slightly higher rate of drug arrest than blacks in 1980 (178 vs. 160 arrests per 100,000) and nearly identical rates in 1981 (Snyder and Mulako-Wangota, 2012). Between 1980 and 1990, however, the black juvenile drug arrest rate grew steadily while the rate for whites declined. This combination of trends produced extreme racial disparities in drug arrest rates among juveniles. In 1990, African-American juveniles had drug arrest rates that were six times higher than whites. Thus, in a 10-year period white and black juveniles went from having equal drug arrest rates to black juveniles having a rate six times higher than whites. Note that at their height, these racial disparities were considerably larger than those among adults. On the other hand, racial disparities in juvenile drug arrests have been much less stable in comparison to adults. After 1990, racial disparities in juvenile drug arrests shrank dramatically, as black juveniles' drug arrest rate began to fall and that of whites increased. These statistics highlight the fact that racial disparities in drug arrests differ in important ways by age.

## Explaining Racial Disparities in Drug Arrests

There are three competing but noncontradictory explanations for the observed racial disparities in drug arrests. The first explanation attributes racial

disparities in drug arrests to differences in the *extent* of drug offending by race (see e.g. Currie, 1993; Duster, 1997; Hagan, 1994). Most often, this explanation posits that race differences in drug offending are due to racial inequality. Broadly, this explanation notes that due to factors such as de-industrialization in the 1970s and 1980s, racial inequality grew and increased minorities' vulnerability to drug use, drug addiction, and the temptations of "employment" in the illicit drug economy.

A second explanation focuses on differences in the *nature* of drug offending in low-status areas, rather than the extent of drug offending (Blumstein, 1993; Coker, 2003; Goode, 2002; Human Rights Watch, 2008, 2009; Tonry, 1995). This explanation notes that minorities are much more likely to live in lower class, inner-city neighborhoods. In these areas, access to private space is more limited and therefore, drug use and drug dealing are more likely to occur in public and semi-public places (e.g. crack houses). Drug sales in these areas also tend to be characterized by frequent, small transactions, and transactions between strangers. And violent gangs often are more likely to be involved in drug distribution in lower class areas. Finally, police are more likely to concentrate their drug control efforts in these areas, because of the public and violent nature of urban drug markets. Further, police use more aggressive tactics in these areas such as "street sweeps," drug courier profiles, consent searches, and so forth (see e.g. Coker, 2003; Cole 1999). Taken together, these factors combine to expose drug offending in lower class areas to greater police surveillance and higher probabilities of police detection.

The third explanation attributes racial disparities in drug arrest rates to conscious or subconscious *racial bias* by police (Alexander, 2010; Beckett, Nyrop, & Pfingst, 2006; Beckett, Nyrop, Pfingst, & Bowen, 2005; Human Rights Watch, 2008, 2009).<sup>4</sup> Perhaps, the most prominent author claiming racial bias in drug enforcement is Alexander (2010). Alexander, in the best-seller *The New Jim Crow*, argues that the policy and tactical changes brought on by the War on Drugs greatly expanded police discretion "regarding whom to stop, search, arrest and charge for drug offenses, thus ensuring that conscious and unconscious racial beliefs and stereotypes will be given free reign" (p. 100). Alexander, like other scholars utilizing this explanation, note that blatant, conscious racial bias has declined dramatically in the post-Civil Rights era;

4. It is important to note that many scholars contend that the War on Drugs is an example of institutional racism (e.g. Duster, 1997; Provine, 2007; Lynch, 2011). For instance, Lynch (2011), using Haney López's (2000) conceptualization of institutional racism, argues that the War on Drugs is a manifestation of institutional racism in that the War on Drugs' policies and tactics are affected by widely shared negative stereotypes of African-Americans as drug offenders. (Haney Lopez refers to these negative stereotypes as "racial institutions.") According to these authors, given that the War on Drugs' policies and tactics are influenced by racial institutions, it is predictable that these policies would reinforce existing racial status hierarchies (protecting whites and disadvantaging blacks). As David Cole notes many of the aggressive policies and tactics utilized in the War on Drugs such as "street sweeps", consent searches, foreseeably affect African-Americans disproportionately, while relatively rarely affecting whites. From this perspective, such tactics reinforce the existing racial hierarchy and the very racial institutions that gave rise to the drug war's (purportedly) racially biased policies/tactics.

however, stereotypes linking minorities, especially African-Americans, to illicit drugs are still pervasive in American society (Devine, 1989; Provine, 2007; Quillian & Pager, 2001; Tonry, 2011). A growing body of social psychological research supports the notion that prevailing racial stereotypes can affect decision-making, even if one holds no conscious racial animus, (see e.g. Dovidio & Gaertner, 2000; Krieger & Fiske, 2006). For example, Devine (1989) in an early study found that respondents regardless of their level racial prejudice as measured by the Modern Racism Scale were knowledgeable about racial stereotypes, and respondents noted that blacks were stereotyped as "hostile" and "criminal-like" (p. 9). Much subsequent research confirms the relationship between race and stereotypes about crime (Devine & Elliot, 1995; Hurwitz & Peffley, 1997; Quillian & Pager, 2001; Sniderman & Piazza, 1993). Such stereotypes appear to be particularly strong when it comes to drug offending. One study found when respondents were asked to close their eyes and envision a drug user more than 95% of respondents described a black person, and when the same respondents also perceived those involved in drug sales as typically being black (Burston, Jones, & Roberson-Saunders, 1995). These negative stereotypes of minorities, especially African-Americans, underlay and fuel implicit bias against minorities. In turn, measures of implicit bias have been experimentally linked to discriminatory decision-making in a host of domains ranging from employment decisions (Krieger & Fiske, 2006), juror decisions (Blair, Judd, & Chapleau, 2004; Eberhardt, Davies, Purdie-Vaughns, & Johnson, 2006; Eberhardt, Goff, Purdie, & Davies, 2004), and shoot/do not shoot decisions (Correll, Park, Judd, & Wittenbrink, 2002; Payne, 2001). Thus, internalized racial stereotypes linking minorities to drug crime may fuel implicit bias in law enforcement decision-making.

In summary, there are three prominent explanations of the racial disparities in drug arrest rates. In what follows, we will refer to these three explanations as: (1) the *extent* of drug offending; (2) the *nature* of drug offending; and, (3) the *racial bias* explanations, respectively. The next section reviews the empirical research relating to each of these explanations.

### *Empirical support*

In this section, we review empirical evidence relating to the three explanations of racial disparities in drug arrests described in the previous section. This body of research is unevenly distributed with relatively plentiful research focusing on race differences in the extent of drug offending, especially drug use, but relatively little research examining race differences in the nature of drug offending, and even less empirical research examining evidence of racial bias in drug arrests. The research that does exist provides some support for all three explanations.

*Extent of drug use and drug offending.* Considerable research assesses the extent of race differences in drug offending. Generally, this body of research indicates that the relationship between race and drug offending varies by age.

More specifically, black *youth* are less likely to use illicit drugs than whites and Hispanics, but black *adults* over the age of approximately 25 are more likely to use illicit drugs than whites and Hispanics. Researchers refer to the age-varying relationship between race and drug use as the racial “age crossover effect” or “racial crossover effect” (French, Finkbiner, & Duhamel, 2002; Watt, 2008). Notably, because adult respondents outnumber youth in most national data-sets, when results are presented in a manner that mixes adult and youthful respondents, blacks tend to have greater illicit drug use rates than whites and Hispanics. This observation is generally reversed in samples made up primarily of youthful respondents and suggests the need to explore the age composition of samples when examining the potential relationship between race and drug use rates.

Findings from the National Survey on Drug Use and Health (NSDUH) and its predecessor, the National Household Survey on Drug Abuse, support the existence of a racial crossover effect. These data indicate that Hispanics and whites age 12 and over have similar rates of past month illicit drug use in most years; although the Hispanic drug use rate has been somewhat lower than that of whites in recent years. African-Americans, by contrast, consistently have higher rates of illicit drug use than whites and Hispanics in these data. For instance, in 2009, 7.6% of Hispanics, 8.9% of whites, and 10.9% of African-Americans reported past month illicit drug use (Substance Abuse and Mental Health Services Administration, 2012). The direction of racial differences in illicit drug use flips when only youth are considered. In the majority of data years the NSDUH data indicate that African-American youth are less likely to be current illicit drug users than whites and Hispanic youth. Consistent with NSDUH data, a recent report analyzing Monitoring the Future data found that African-American high school seniors had lower rates of illicit drug use in the past year than whites and Hispanics in every year from 1975 to 2010 (Johnston, O’Malley, Bachman, & Schulenberg, 2011). Thus, there is considerable evidence of a racial age crossover effect in rates of drug use across longitudinal, nationally representative data-sets.

The findings discussed above concerning national aggregate measures of drug use prevalence may not be indicative of the kinds of serious drug use likely to lead to arrest (Goode, 2002; Western, 2006). One available measure of serious drug use that may help explain racial differences in drug arrest rates is drug-involved emergency room visits. The Drug Abuse Warning Network monitors drug-involved emergency room visits in a nationally representative sample of 24-h emergency rooms. These data suggest that African-Americans have greater substance abuse problems than whites and Hispanics. For example, in 2009, African-American patients made up 27% of emergency room visits involving illicit drugs—a percentage approximately double their percentage in the general US population; whereas, the percentage of drug-involved emergency room visits involving Hispanic (13%) or white (51%) patients was at or below their population percentage (Substance Abuse and Mental Health Services Administration, 2011, Table 6).

Another measure of serious drug use is fatal drug overdose. National data on this measure reported by race could not be found. However, one published study examining fatal accidental drug overdose in New York City between 1990 and 1998 found that black and Latino rates of fatal overdose were consistently higher than those of whites (Galea et al., 2003). As an illustration, in 1993, the peak year for drug overdose deaths, blacks (31.6 per 100,000 person-years) and Latinos (29.6 per 100,000 person-years) had rates considerably higher than whites (20.2 per 100,000 person-years). This finding held throughout the period of observation, particularly for cocaine related overdose deaths.

Measures of more serious drug use that are available by age provide additional support for the racial age crossover effect. Since 1999, the NSDUH includes a measure of past year drug dependence, based on DSM-IV criteria. These data indicate that young African-Americans (less than 26 years old) are less likely than whites and Hispanics of the same age to be drug dependent; whereas, blacks aged 26 and older have higher rates of dependence than whites and Hispanics. In the 2010 NSDUH data, the illicit drug dependence rate among 12–17-year olds was 1.8% for blacks and 2.6% for whites; likewise, among 18–25-year olds these rates were 5.2 and 5.6% for blacks and whites, respectively. Yet, after age 25, the direction of the difference changes with blacks (2.4%) having higher rates of dependence than whites (1.1%).

The empirical evidence reviewed above provides support for the validity of the differential extent explanation of racial disparities of drug arrests. It is important to note, however, that the magnitude of the differences in drug use rates is substantially smaller than the aforementioned racial disparities in arrest rates. For example, the NSDUH drug dependence data indicate that African-American adults over the age of 25 have dependence rates approximately 120% greater than whites in the same age group; yet, the African-Americans have drug arrest rates approximately 260% higher than those of whites.

*Nature of drug use and drug offending.* The second explanation of racial disparities in drug arrests asserts that these disparities are caused by differences in the *nature* of drug offending across race. The small body of empirical research assessing the nature of drug transactions by race and place offers some support for the second explanation of racial disparities in drug arrests. Dunlap, Johnson, and Manwar (1997) conducted a large-scale ethnographic research project, the “Natural History of Crack Distribution,” which studied not only crack but also powder cocaine and heroin distributors. These authors found that there were two “relatively distinct types of drug-selling careers” which they labeled the “inner-city” and “middle-class” career types (Dunlap et al., 1997, p. 208-209). Both types of dealers were typically youths or young adults, but middle-class dealers “almost always sell directly to steady customers in private settings ... and usually sell in relatively large quantities” (p. 209). For these middle-class dealers, violence was relatively uncommon. “Inner-city dealers, in contrast, often lack access to private settings for sales and typically sell in public locations to buyers they do not know ... and usually sell smaller retail units” (p. 209). Additionally, violence and the threat of violence were

common among inner-city drug dealers. The work of Dunlap and colleagues suggests that drug-related arrest rates among minorities may be the product of the nature of drug distribution networks in inner-city, disadvantaged neighborhoods.

Other evidence of race differences in the nature of drug offending comes from a recent study by Ramchand, Pacula, and Iguchi (2006). These authors investigated the purchase patterns of marijuana users using 2002 NSDUH data. They found that African-Americans were nearly twice as likely as whites to buy marijuana outdoors and three times more likely to buy marijuana from a stranger. They interpreted their findings as partial support for the nature of drug offending hypothesis. While Ramchand and colleagues did not directly relate the observed differences in marijuana purchasing patterns to drug arrests, they did use these differences combined with estimates of the racial distribution of marijuana transactions to estimate the expected number of drug arrests by race. Based on these estimates, Ramchand et al. concluded that African-Americans' more risky purchasing patterns

account for only a relatively small amount of the observed differential in arrest rates ... Whites should still be arrested at a rate at least twice that of African Americans if the only thing driving these arrests were differential purchasing patterns. Instead, we observed in the real world that it is African Americans who are arrested at a rate that is twice that of Whites. (p. 271)

Again, while empirical support exists for the nature of drug offending hypothesis, the magnitude of these differences do not appear to be sufficient to account for the large disparities in arrest rates consistently observed for African-Americans.

*Racially biased law enforcement.* Conclusions like those of Ramchand and colleagues suggest that conscious, or more likely unconscious, racial bias may affect the discretionary decisions of police making drug arrests. Unlike in laboratory settings, there are no measures of implicit, unconscious bias in the field, and therefore the link between unconscious bias and criminal justice decision-making must be inferred. A recent project by Katherine Beckett and colleagues made such an inference after examining racial bias in drug possession arrests (Beckett et al., 2005) and drug distribution arrests (Beckett et al., 2006) in Seattle, Washington. In this innovative project, the research team collected data on the race of drug users from a survey of needle exchange clients, publicly funded treatment records, and by observing two open-air drug markets. They also collected information on the race of drug distributors by asking needle exchangers about the characteristics of the drug distributors who supplied their drugs. These data were then compared with drug possession and distribution arrests from the Seattle Police Department. Based on these comparisons, Beckett and colleagues found that black drug users were significantly overrepresented among marijuana, methamphetamine, and crack arrestees, while Hispanics were significantly overrepresented among heroin

and crack arrestees. Based on these findings, Beckett and colleagues inferred that the overrepresentation of blacks and Hispanics among drug arrestees “is largely a consequence of law enforcement’s focus on black and Latino users of crack cocaine” (Beckett et al., 2005, p. 435). And while differential access to private space contributed to racial disparities in Seattle’s drug arrests, this factor was much less important than the focus of law enforcement strategies on crack cocaine. Beckett et al. concluded that the focus on crack users and sellers does not appear “to be explicable in racially neutral terms” (Beckett et al., 2005, p. 436). Instead, cultural stereotypes linking disadvantaged minorities to drugs appeared to affect how Seattle police utilized their considerable discretion in making drug arrests.

While the body of evidence reviewed above provides invaluable information towards understanding racial disparities in drug arrests, it has several notable shortcomings. One significant shortcoming evident in much of the research is the use of aggregate data, which is incapable of *simultaneously* considering the effects of multiple factors like racial differences in frequency and variety of drug offending. In other words, minorities’ overrepresentation among drug arrestees may be attributable to a *combination* of relatively small race differences in the frequency of drug use, drug sales, and contact with law enforcement for nondrug offending (which in turn elevates the likelihood of drugs being found on African-Americans). Another shortcoming in using aggregate data is that such data are susceptible to aggregation bias, which potentially distorts findings (e.g. pooling juvenile and adult data may produce misleading findings). A third shortcoming is that, with the exception of Beckett and colleagues’ work, none of the existing research actually related race differences in the extent and nature of drug offending to the likelihood of drug arrest. What is needed is additional research that includes measures of the *extent* and *nature* of drug use by race and uses multivariate analyses capable of *simultaneously* estimating the effect of these variables. The current research aims to fill this gap in the extant literature.

## Methods

### Data

The purpose of this study is to test whether race differences in drug arrests are explained by race differences in drug offending, nondrug offending, and/or neighborhood contextual features. To examine this issue, we utilized data from the National Longitudinal Survey of Youth 1997 (NLSY97). The NLSY97 is a multi-wave panel study of a nationally representative sample of 8,984 youth living in the USA in 1997, who were between the ages of 12 and 16 as of 31 December 1996 (Center for Human Resource Research, 2003; Moore, Pedlow, Krishnamurty, & Wolter, 2000). Currently, 13 waves of NLSY97 data are available (1997–2009), covering ages 12–29 years. Importantly, the NLSY97 data

oversampled African-Americans (26%) and Hispanics (21%). Further, the NLSY97 has had high response rates, with an initial response rate of 91.6% and retention rates ranging from 81.7 to 93.3% (84.2% in round 13).

The primary aim of the NLSY is to examine the transition from school to work; therefore, the NLSY97 collects extensive yearly data relating to school and labor market experiences. The NLSY97 also collects data on a number of other domains such as dating, sexual activity, birth of a child, family formation, and so forth. Of particular interest to us is the self-report data concerning criminal behavior which includes measures of drug use, drug sales, nondrug offending, and drug arrests. This portion of the NLSY97, because of the sensitive nature of this information, is self-administered via computer-aided interview (Center for Human Resource Research, 2003). Specifically, respondents enter their responses to potentially sensitive questions regarding offending and substance use directly into a computer. This procedure shields responses from the interviewer, which potentially reduces social desirability bias and increases validity.

Three features of the NLSY97 data make them well suited for our study purposes. First, these data follow the same sample of respondents over time (i.e. panel data). This feature is important because it allows for the study of within-individual and between-individual variation in arrest and offending. Second, as mentioned above, the NLSY97 oversampled minorities, which facilitates racial comparisons. Third, the NLSY97 data contain self-report measures of the extent of drug offending, the nature of drug offending, neighborhood contextual features, and other relevant controls. Fourth, the NLSY97 collects data from those incarcerated at the time of interview and asks respondents about time spent incarcerated, which allows us to control for days at risk (i.e. days between interviews in the community).

## Measures

### *Dependent variable*

Respondents were queried about their contact with the criminal and juvenile justice systems. In the first round of the NLSY97, all respondents were asked if they *ever* had been arrested by the police or taken into custody for an illegal or delinquent offense (not including minor traffic violations). Respondents reporting an arrest were asked details about the arrest including the date of the arrest, whether they were charged with a specific offense, and if so, the type of offense charge and the outcome of the case. In subsequent data rounds, respondents were asked if they had been arrested *since the date of last interview*, as well as questions about the details of the arrest. Based on the responses to these questions, we created a dichotomous dependent variable that flagged respondents who were arrested on a drug charge in each round of data collection. Note that this is a time-varying dependent variable as its values change from one round of data to the next.

*Independent variables*

The questions regarding contact with the criminal and juvenile justice systems (described briefly above) also allowed us to create a measure of the number of nondrug arrests experienced by each respondent in each data round. This measure was used to construct another variable that records the number of prior nondrug arrests, which was used as a key control variable in the analyses that follow. Respondents reporting contact with the criminal justice system were queried about the length of incarceration (time served). We used this information to control for time at risk for drug arrest in each round. Specifically, we calculated days at risk by subtracting the number of days incarcerated in a particular data round from the number of days between rounds; the resulting variable measures the number of nonincarcerated days in each round.

The NLSY97 includes several useful measures of drug use. In the first round of the data (1997), respondents were asked if they have *ever* used marijuana, and if so, the number of days they had used marijuana in the past 30 days. In each subsequent round, all respondents were asked if they had used marijuana *since the date of last interview*; and if they had, they were asked the number of days in the past 30 days they had used marijuana. Beginning in the *second* round of the data (1998), respondents were asked if they had *ever* used hard drugs (i.e. "drugs like cocaine or crack or heroin, or any other substance not prescribed by a doctor, in order to get high"), and if so, they were also asked the number of times they had used hard drugs. In subsequent data rounds, respondents were asked if they had used hard drugs *since the date of last interview* and the number of times these substances were used.

Respondents were also asked about their involvement in drug sales, assault, and four types of property offenses: destruction of property, theft of something worth less than \$50, theft of something worth \$50 or more (including cars), and other property crimes (including fencing stolen property, possessing or receiving stolen property). In the first round, respondents were asked if they had *ever* been involved in each of these kinds of crimes; and if so, they were asked how many times they had committed that type of crime. In subsequent rounds, respondents were asked if they had committed each of these types of crimes *since the date of last interview*; and if so, they were asked the number of times each crime had been committed since the date of last interview. Additionally, respondents who reported involvement in drug sales were how much cash income they received from their involvement in drug sales.

The NLSY97 also includes measures of gun carrying. Gun carrying, in the context of drug offending, implies that the threat of violence hangs over transactions. Thus, gun carrying is a potentially important difference in the nature of drug offending that may vary by race. Specifically, in each round of data collection, respondents were asked the number of days in the past month they had carried a gun.

Responses from the arrest and offending measures described above were used to construct variables capturing the number of arrest and offenses

committed in the *previous round* of data collection. Specifically, we created independent variables that capture the number of times respondents in most recent previous round of data were arrested on nondrug charges, used marijuana (days in the past 30), used hard drugs, sold drugs, committed assault, committed property crimes, and carried a gun (days in the past 30), as well as income earned from drug sales.<sup>5</sup> We made each of these offending variables reflect prior offending to ensure proper temporal order. Further, we made the number of prior nondrug arrests variable *cumulative*, as we believe that cumulative experience with the criminal justice system is a more powerful predictor of future contact with the system than simply number of arrests in the most recent prior round of data.

Unfortunately, the NLSY97 is relatively weak in terms of measuring crime-related neighborhood features and neighborhood context. As a proxy for lower class neighborhoods with crime problems and increased police presence, we combined two measures, residing in city centers (as opposed to suburban and rural areas) and residing in neighborhoods with gangs, into one dichotomous variable that flags respondents who reported living in city centers and reported the presence of gangs in their neighborhood. We labeled this measure "inner-city gang neighborhood." Unlike the offending measures, our measure of neighborhood context is not lagged, as we believe that context affects the likelihood of arrest contemporaneously.

Together these measures capture important variations in drug offending, nondrug offending, and neighborhood context. The measures of prior assaults and property crime capture differences in the extent of nondrug offending, whose detection by police could increase the likelihood that drug offending comes to the attention of authorities. Conceptually, the measures of prior marijuana use, hard drug use, and drug sales represent differences in the *extent* of drug offending. While the measures of income from drug sales, gun carrying, assaults, and residing in inner-city gang neighborhoods capture differences in the *nature* of drug offending; in that, offenders who made more income from drug sales (at a given level of drug sales) were more likely to sell drugs frequently, to sell to strangers, and to be committed drug sellers as opposed to distributing drugs among friends/acquaintances in the expectation of reciprocity at a later time. Moreover, drug sellers with greater histories of assault and gun carrying are likely to distribute drugs in contexts with greater violence and threats of violence.<sup>6</sup> And, police are likely to place greater emphasis on drug offending in high-crime neighborhoods. Notably, we have no measures of conscious or unconscious racial bias; instead, if racial disparities

5. Note that number of property crimes independent variable is a composite of theft, property destruction, and "other property crimes." We combined these measures for parsimony and to reduce the likelihood of multicollinearity.

6. Note that we conceptualize prior assaults as both a measure of prior nondrug offending and as a measure of differences in the nature of drug offending. We recognize that our conceptualization of variables that tap differences in the nature/extent of drug offending is subjective and debatable. However, this distinction is purely academic and has no influence the results that follow.

are not explained by the variables described above, then we consider this “unwarranted” racial disparity as evidence of racial bias.

### *Data limitations*

While these data are well suited to address the issue of interest, one important limitation with them is that the items measuring criminal offending and the items assessing contact with the criminal justice system were not asked of every respondent after round 7. These items were asked of every respondent in rounds 1 through 7 (1997–2003), but thereafter were only asked of respondents who had reported previous contact with the criminal justice system and a 10% random sample of those surveyed in each round who had not been previously arrested. This change resulted in considerable missing data in rounds 8 through 13. Fortunately, the three racial groups had very similar percentages of respondents with missing data on these items after round 7; specifically, 40.9% of African-Americans, 41.4% of Hispanics, and 41.8% of whites were not asked the offending and criminal justice contact items after round 7 ( $p > .05$ ). Thus, we have no reason to suspect that missing data biases these results.<sup>7</sup>

### Analytic Strategy

The multi-wave panel design of the NLSY97 with multiple observations nested within individuals permits the use of fixed-effects regression methods. Generally, such models can be expressed as:

$$y_{it} = \mu_t + \beta x_{it} + \gamma z_i + \alpha_i + \varepsilon_{it}$$

where  $y_{it}$  is the dependent variable of interest for individual  $i$  at time  $t$ ,  $x_{it}$  is a column vector of time-varying predictor variables,  $z_i$  is column vector of observed time-stable variables,  $\mu_t$  is an intercept that can vary with time,  $\beta$  and  $\gamma$  are row vectors of coefficients, and  $\varepsilon_{it}$  is a random error term for individual  $i$  at time  $t$  (Allison, 2005). Most important,  $\alpha_i$  refers to all “fixed,” time stable but unobserved characteristics of individual  $i$  (e.g. intelligence, propensity towards drug use, propensity towards nondrug offending). Fixed-effects regression analyses control for these vital time-stable factors by focusing on within-individual variation (Allison, 2005; Rabe-Hesketh & Skrondal, 2008; Singer & Willett, 2003).

This fixed-effects approach has several advantages over standard regression techniques (i.e. nonlongitudinal regression methods). First, fixed-effects regression analyses are well suited for longitudinal data. Second, fixed-effects

7. The missing data problems associated with not asking many respondents about offending after round 7 are mitigated by the fact that these data are missing at *random* and therefore should not bias the results; and, the primary analytic strategy employed (fixed-effects regression) handles unbalanced data well.

analyses permit lagged independent variables, which ensure proper temporal order. Third, while fixed-effects analyses cannot estimate the effect of time-stable independent variables such as race, they can estimate whether the effect of time-stable independent variables like race have variable effects over time (i.e. age) by interacting time-stable variables with age (or other time measures). Given the considerable evidence that the magnitude of racial disparity in drug arrests is larger in adulthood than in adolescence and the evidence of the racial age crossover effect in drug offending, we expect the effect of race to vary with age. Unlike standard regression techniques, fixed-effects analyses allow the effect of race and other time-stable variables to vary within individuals with age. Fourth, fixed-effects analyses accurately estimate the effect of observed variables (e.g. race/age interactions), even if important unobserved variables are correlated with the observed variables (e.g. intelligence, criminal propensity, and propensity towards drug use/addiction), so long as the unobserved variables have consistent associations with the dependent variable. This is an important advantage over standard regression techniques that require unobserved (omitted) variables to be uncorrelated with observed variables in order to accurately estimate observed variables' effects. The ability to control for unobserved time-stable factors in fixed-effects analysis mimics the ability of randomized experimental designs to control for unobserved factors; however, fixed-effects analyses' ability is limited to time-stable variables only (Allison, 2005). Still, this is a significant improvement over alternative analytic strategies, and bolsters confidence in the causal validity of the results.

In the current study, we utilized conditional (fixed-effects) logistic regression. We regressed a dichotomous *time-varying measure* of drug arrest, coded 1 if the respondent was arrested on a drug charge (use or sales) in a particular data round and 0 otherwise, on the race by age interaction terms while controlling for age, measures of prior drug offending (drug use and drug sales), prior nondrug offending (property offending and assaults), prior nondrug arrest, neighborhood context, and days at risk. The resulting analyses examine the magnitude of racial disparity in drug arrests by age from ages 12 to 29 years old, while controlling for salient measures of drug and nondrug offending, as well as neighborhood crime problems.

## Results

### Description of Sample

Table 1 displays descriptive statistics on the measures of interest stratified by race. The NLSY97 data indicate that in the full sample of respondents, 10.4% of African-Americans, 7.7% of Hispanics, and 6.8% of nonHispanic whites were arrested on a drug charge in the period of observation. These figures indicate that African-Americans were 53% and Hispanics 13% more likely than whites to

be arrested for a drug offense. Thus, these data like previous national and local examinations of drug arrests by race/ethnicity find strong evidence of disparities, particularly when comparing African-Americans to whites.

As discussed above, African-Americans' and Hispanics' higher rate of drug arrest could be explained by their greater involvement in drug use, drug distribution, nondrug offending, or concentration in lower class, high-crime neighborhoods—any of which individually or in some combination could elevate the probability of minorities' contact with police and subsequent drug arrest. However, the NLSY97 data indicate that there is no measure of drug offending for which African-Americans or Hispanics reported statistically higher levels of offending than whites. African-Americans and Hispanics reported statistically lower rates of drug offending on nearly every measure of drug offending including the percentage that had ever used drugs, used marijuana, used hard drugs, sold or helped sell drugs, and committed any drug offense (i.e. drug use or involvement in drug sales). On the other hand, African-Americans exhibited greater frequencies of assault and gun carrying than whites. African-Americans and Hispanics were also much more likely than whites to report living in the kinds of neighborhoods likely to have heavy police patrol and limited private space, as statistically higher percentages of minorities (approximately 14%) than whites (5%) reported living in inner-city areas with gang activity.

Given the evidence discussed above regarding the racial age crossover effect in drug offending, it is important to investigate racial disparities in the probability of drug arrest by age. Figure 1 displays the probability of drug arrest between ages 12 and 29 by race. This figure shows that there is a strong quadratic relationship between the probability of drug arrest and age, and the probability of drug arrest at any particular age is small—approximately 1.7% at its peak. For whites and Hispanics, this probability was essentially zero at age 13 but grew rapidly until it peaked at approximately age 18, and thereafter declined—rapidly at first and then more slowly. For African-Americans, the probability of drug arrest also was essentially zero at age 13 and grew rapidly until it peaked at age 21. The most distinct difference between these racial groups was that the probability of drug arrest for blacks remained relatively high in the 20s, particularly between the ages of 21 and 26, but for the other racial groups the probability of drug arrest fell precipitously. In fact, during the early 20s to mid-20s, blacks' probability of drug arrest was more than twice that of whites.

## Regression Analyses

A series of three conditional logistic regression models were estimated. The first model serves as a baseline model in that it estimates the magnitude of racial disparity in drug arrest at various ages by interacting race with age. The second model assesses whether racial disparities in drug arrest were attributable to differences in drug and nondrug offending by adding such measures to

Table 1 Sample characteristics by race (full sample, N = 8,901)

Variable (time frame)	Black (n = 2,335) % or mean (SD)	Hispanic (n = 1,901) % or mean (SD)	White (n = 4,665) % or mean (SD)
<i>Arrests</i>			
Drug arrest	10.4%***	7.7%	6.8%
Nondrug arrests	.50 (1.21)*	.41 (1.07)	.42 (1.06)
<i>Demographics</i>			
Age, 1997	14.59 (1.48)	14.53 (1.49)	14.55 (1.48)
Female	49.9%	48.6%	48.3%
<i>Drug offending</i>			
Any drug offense	57.0%***	58.2%***	63.4%
Used drugs	56.1%***	57.5%***	63.0%
Used marijuana	55.5%***	55.2%***	62.0%
Marijuana use, past 30 days	19.89 (46.47)	16.56 (44.14)***	22.17 (51.73)
Used hard drugs	11.4%***	24.2%***	27.3%
Hard drug use	9.87 (67.21)**	22.39 (104.57)***	32.58 (141.64)
Sold drugs	16.0%***	19.2%*	22.0%
Drug sales	23.59 (165.06)	20.48 (142.69)	20.61 (118.88)
Sold hard drugs	9.5%	11.3%	10.4%
Drug income, (\$1000s)	3.57 (42.55)	3.13 (44.86)	2.63 (44.39)
<i>Nondrug offending, cumulative</i>			
Property crimes	10.81 (35.09)	13.42 (41.81)	12.51 (35.83)
Assault	3.40 (11.61)***	2.67 (10.28)	2.16 (9.43)
Days carry gun, past 30	4.91 (19.17)***	2.64 (11.96)	3.45 (15.53)

(continued)

**Table 1** (continued)

Variable (time frame)	Black (n = 2,335) % or mean (SD)	Hispanic (n = 1,901) % or mean (SD)	White (n = 4,665) % or mean (SD)
<i>Contextual, % of rounds in:</i> Inner-city gang neighborhoods	14.7%***	14.0%***	5.0%

*Notes.* <sup>1</sup>Unless otherwise noted, variables cover the 1997–2009 data rounds. All statistical significance tests compared a minority group to whites. \*p < .05. \*\*p < .01. \*\*\*p < .001.

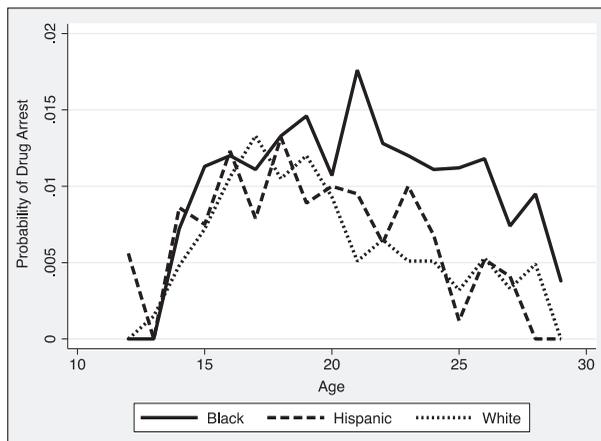


Figure 1 Probability of drug arrest by age and race.

the race by age interaction terms in Model 1. Finally, the third model adds the measure of neighborhood context to the analysis to test whether race differences in the probability of drug arrest are attributable to differences in neighborhood crime.

The logic of these nested models is that, if the extent and nature explanations of racial disparities in drug arrest are correct, then the racial/ethnic disparities in drug arrest revealed in Model 1 should shrink as the variables measuring offending and neighborhood context are taken into account. However, if the magnitude of racial/ethnic disparities remains substantively large and statistically significant, then such a finding would be most consistent with racial bias explanation of racial disparities in drug arrests.

Table 2 summarizes the results of the three nested models. In Model 1, the age coefficients (age and age<sup>2</sup>) indicate that age has a quadratic relationship with the log-odds of drug arrest. Note that age is centered at age 16 (i.e. 16 is subtracted from observed ages, therefore, age 16 equals 0).<sup>8</sup> Given this coding, the quadratic relationship indicates that the log-odds of drug arrest increase with age until approximately age 18 and decrease thereafter. The age by minority status interactions estimate the magnitude of racial disparities in drug arrest in the observed age range (12–29). The statistically significant interaction between age and being African-American indicates that the quadratic relationship between age and drug arrest differs between whites and blacks, with African-Americans' log-odds of drug arrest increasing more rapidly with age than whites. For example, holding all other variables constant, at ages 17, 22, and 27 African-Americans' odds of drug arrest are approximately

8. Age was centered at 16 years old to avoid the intercept reflecting an unrealistic age (age 0) and to avoid the intercept from extrapolating beyond the youngest observed age (age 12). We arbitrarily centered age at age 16, because this is the youngest age for which data were available on the vast majority of respondents. Centering age, at some arbitrary but meaningful value, is a necessary step for many kinds of longitudinal data analysis (see e.g. Singer & Willett, 2003).

13, 83, and 235% greater than whites, respectively. By contrast, the interaction between age and being Hispanic is substantively small and not statistically significant and indicating that Hispanics have similar log-odds of drug arrest as whites. All of these findings are supported by the visual inspection of Figure 1.

Model 2 adds the lagged measures of drug and nondrug offending to the demographic variables included in Model 1. Interestingly, the only offending variable that exhibited a statistically significant relationship to the log-odds of drug arrest was frequency of marijuana use in the prior round of data collection. This finding makes sense when one considers that the vast majority of drug arrests involved drug possession offenses and most drug users primarily used marijuana. The only other variable that had a statistically significant relationship to the log-odds of drug arrest was number of days at risk. Here, there was a negative relationship between these variables. This finding is attributable to the fact that drug arrestees typically had fewer days at risk in the round of the drug arrest.

Most important for this research is the finding that the magnitude of the race by age interaction is still sizeable and statistically significant, even after taking into account the measures of drug and nondrug offending. In fact, after taking the offending variables into account, the magnitude of the racial disparity in drug arrest was reduced by approximately 15%. This finding indicates that, in this age range, the vast majority (approximately 85%) of racial disparity in drug arrests between whites and blacks is not attributable to race differences in drug and nondrug offending. By contrast, the disparity between whites and Hispanics remains substantively small and nonstatistically significant.

Finally, Model 3 adds the contextual risk factor of living in an inner-city neighborhood with gangs to the preceding models. Unlike all of the other time-varying independent variables in the model, this measure is *not* lagged. Therefore, Model 3 views drug arrest as a function of demographic, lagged offending, and contemporaneous contextual variables. The estimates from Model 3 suggest that residing in an inner-city gang neighborhood has a strong, positive, and statistically significant relationship with the log-odds of drug arrest. Specifically, living in an inner-city gang neighborhood increased the odds of drug arrest by 78%, holding other variables constant.

Once again, the magnitude of the interaction between age and being African-American changes only slightly and remains statistically significant indicating that race differences in neighborhood context do not explain the observed racial disparity in drug arrest. More concretely, while neighborhood context is strongly related to the likelihood of drug arrest, the magnitude of the racial disparity in the likelihood of a drug arrest remains sizeable and statistically significant. The results presented in Model 3 indicate that approximately 87% of the black/white disparity in the likelihood of experiencing a drug arrest in a given year is *not* attributable to differences in prior drug and nondrug offending, and neighborhood context. Thus, above and beyond, all of

**Table 2** Race and drug arrest conditional (fixed-effects) logistic regression

Drug arrest	Model 1 coef.	Model 2 coef.	Model 3 coef.
Age	.047	-.005	-.005
Age <sup>2</sup>	-.022***	-.018***	-.018***
Age*black	.121**	.103*	.105**
Age*hispanic	-.014	-.019	-.017
Prior nondrug arrests, cumulative		.100	.106
Prior marijuana use, past 30		.023***	.022***
Prior hard drug use		.001	.001
Prior drug sales		.001	.001
Prior property crimes		.001	.001
Prior assault		-.010	-.010
Prior gun carry, past 30		.020	.019
Prior drug income, \$1,000		-.001	-.001
Live in gang neighborhood			.577***
Days at risk	-.002*	-.002**	-.002**
<i>Model fit</i>			
Observations	3,540	3,540	3,540
Likelihood ratio $\chi^2$	98.74***	127.78***	137.47***
Pseudo $R^2$	.049	.063	.068

Note. # $p < .10$ , \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

the factors included in Model 3, being African-American increases the likelihood of drug arrest, especially in adulthood (i.e. after age 18).

It is important to note that the findings presented here are also supported by alternative models. One set of alternative analyses excluded the nonstatistically significant predictor of hard drug use—recall that this variable is missing for the first round of data collection. This omission increased the number of observations available, but did not change the results substantively. Another set of alternative analyses involved race-specific models. The results of these race-specific models continued to indicate that the quadratic relationship between age and drug arrest is different for African-Americans, with the linear portion of this relationship being larger for African-Americans (.305) than whites (–.115) or Hispanics (.027) but the quadratic (squared) component being substantively similar across the groups (ranging from –.03 to –.01). A third set of alternative analyses used contemporaneous measures of offending instead of prior offending. In this model, all of the offending measures had positive and statistically significant relationship with the log-odds of drug offending with the exception of income from drug sales. Remarkably, the magnitude of the age by race interactions was virtually identical to those reported in Table 2 (.117 in Models 2 and 3 vs. .103 and .105 in the models reported here). Thus, these results are robust and supported by alternative model specifications.

## Discussion and Implications

The architects of the War on Drugs called for major tactical changes in America's drug control strategy. The new strategy urged law enforcement to dramatically increase the number of arrests by targeting all drug offenders including low-level drug sellers and users. This strategy was designed to hold all drug offenders accountable. Policy-makers asserted that this tactical shift would effectively deter future drug offending, especially among young drug offenders. Undeniably, this revised War on Drugs was effective in dramatically increasing drug arrests. The massive increase in drug arrests since mid-1980s is proof positive of this achievement, and the growing proportion of drug possession arrests demonstrates that low-level offenders have made up the bulk of this growth in drug arrests.

The effectiveness of this tactical shift in holding *all* drug offenders accountable, however, is highly questionable. This research found that, rather than holding all drug offenders accountable for their crimes, the policies pursued under the War on Drugs disproportionately held African-Americans accountable for their transgressions. Specifically, this research found that, after controlling for differences in drug and nondrug offending as well as a measure of community crime problems, African-American drug offenders had elevated likelihoods of drug arrest and the magnitude of this race effect grows with age. Before age 17, whites and blacks had similar likelihoods of drug arrest. Yet, in early adulthood, race disparities in drug arrest grew substantially; as early as age 22, African-Americans had 83% greater odds of a drug arrest than whites and at age 27 this disparity was 235%. Hispanic drug offenders, however, were no more likely than whites to be arrested on drug charges, once contextual characteristics were taken into consideration.

Contrary to popular explanations of racial disparities in drug arrest, this research found that the racial disparity in drug arrests between black and whites cannot be explained by race differences in the *extent* of drug offending, nor the *nature* of drug offending. In fact, in this sample, African-Americans (and Hispanics) were no more, and often less, likely to be involved in drug offending than whites. Further, while minorities were more likely to live in the kinds of neighborhoods with heavy police emphasis on drug control and living in such neighborhoods had a strong relationship to drug arrest; neighborhood context explained only a small portion of racial disparity in drug arrests between African-Americans and whites. These findings are consistent with those from previous research addressing racial disparities in drug arrest (Beckett et al., 2005; 2006; Ramchand et al. 2006) that have found that racial disparities in drug arrest are only partially explained by race differences in drug offending. Simply stated, roughly 85% of African-Americans' higher probabilities of drug arrest are *not* attributable to differences in drug use, drug sales, nondrug offending, or neighborhood context. Instead, our findings are consistent with Beckett et al.'s explanation, which attributes African-

Americans' higher probability of drug arrest to *racial bias* in law enforcement. To be clear, these findings do not prove that blacks' elevated rates of drug arrest are due to racial bias in law enforcement—these findings are simply consistent with such an explanation.

Notably, the finding that race differences in drug offending, nondrug offending, and neighbor context did not fully explain racial disparities in drug arrest is also consistent with research examining race and drug sanctioning at other stages of the criminal justice system. Studies examining a variety of sentencing decisions (e.g. imprisonment decisions, application of sentencing enhancements such as mandatory minimum sentences) find that even after taking into account measures of current offense seriousness and prior criminal conduct African-Americans convicted of drug crimes are treated more punitively than whites (for reviews of this research see Mitchell, 2005; Spohn, 2000). Thus, our findings are consistent with existing explanations and prior research concerning drug sanctioning.

This evidence of unwarranted racial disparity in drug sanctioning combined with mounting concern about the effectiveness of the War on Drug's tactics stimulates a growing chorus for drug control policy reform. Several jurisdictions recently have debated or passed legislation making marijuana the "lowest priority" of law enforcement (Seattle, WA and Kalamazoo, MI), removing criminal sanctions for the possession of small amounts of marijuana (Chicago, IL and Rhode Island), removing criminal sanctions for public possession of marijuana (New York), increasing thresholds triggering mandatory minimum prison sentences (federal system and New York), and eliminating mandatory minimum prison sentences for drug offenses (Michigan), as a few examples. Racial disparity in drug sanctioning has been a central issue in these debates and policy reforms. The current research highlights that a key source of racial disparity in drug sanctions is the drug war's emphasis on making large numbers of arrests for low-level drug offenses, and therefore policy reforms designed to reduce racial disparities need to target this aspect of drug control policy. We hope this research informs and contributes to these policy debates.

### Acknowledgements

This project was supported by Award No. 2011-IJ-CX-0004/USF, awarded by the National Institute of Justice, Office of Justice Programs, US Department of Justice. The opinions, findings, and conclusions or recommendations expressed in this publication/program/exhibition are those of the author(s) and do not necessarily reflect those of the Department of Justice.

### References

- Alexander, M. (2010). *The new Jim Crow: Mass incarceration in the age of colorblindness*. New York, NY: The New Press.

- Allison, P. D. (2005). *Fixed-effects regression methods for longitudinal data using SAS*. Cary, NC: SAS Institute Inc.
- Baum, D. (1996). *Smoke and mirrors: The war on drugs and the politics of failure*. Boston, MA: Little, Brown and Company.
- Beckett, K., Nyrop, K., & Pflingst, L. (2006). Race, drugs, and policing: Understanding disparities in drug delivery arrests. *Criminology*, *44*, 105-137.
- Beckett, K., Nyrop, K., Pflingst, L., & Bowen, M. (2005). Drug use, drug possession arrests, and the question of race: Lessons from seattle. *Social Problems*, *52*, 419-441.
- Blair, I. V., Judd, C. M., & Chapleau, K. M. (2004). The influence of Afrocentric facial features in criminal sentencing. *Psychological Science*, *15*, 674-679.
- Blumstein, A. (1993). Making rationality relevant: The American society of criminology 1992 presidential address. *Criminology*, *31*, 1-16.
- Boyum, D., & Reuter, P. (2005). *An analytic assessment of US drug policy*. Washington, DC: AEI Press.
- Burston, B. W., Jones, D., & Roberson-Saunders, P. (1995). Drug use and African Americans: Myth versus reality. *Journal of Alcohol and Drug Education*, *40*, 19-39.
- Center for Human Resource Research. (2003). *NLSY97 user's guide: A guide to the rounds 1-5 data national longitudinal survey of youth 1997*. Washington, DC: Bureau of Labor Statistics.
- Coker, D. (2003). Addressing the real world of racial injustice in the criminal justice system. *Journal of Criminal Law & Criminology*, *93*, 827-880.
- Cole, D. (1999). *No equal justice: Race and class in the American criminal justice system*. New York, NY: The New Press.
- Criminal Justice Statistics Center. (2000). *Report on drug arrests in California from 1990 to 1999*. Sacramento, CA: California Department of Justice.
- Correll, J., Park, B., Judd, C. M., & Wittenbrink, B. (2002). The police officer's dilemma: Using ethnicity to disambiguate potentially threatening individuals. *Journal of Personality & Social Psychology*, *83*, 1314-1329.
- Currie, E. (1993). *Reckoning: Drugs, the cities, and the American future*. New York, NY: Hill and Wang.
- Devine, P. G. (1989). Stereotypes and prejudice: Their automatic and controlled components. *Journal of Personality and Social Psychology*, *56*, 5-18.
- Devine, P. G., & Elliot, A. J. (1995). Are racial stereotypes really fading? The Princeton trilogy revisited *Personality and Social Psychology Bulletin*, *21*, 1139-1150.
- Dovidio, J. F., & Gaertner, S. L. (2000). Aversive racism and selection decisions: 1989 and 1999. *Psychological Science*, *11*, 315-319.
- Dunlap, E., Johnson, B. D., & Manwar, A. (1997). A successful female crack dealer: Case study of a deviant career. In L. K. Gaines & P. B. Kraska (Eds.), *Drugs, crime, and justice: Contemporary perspectives* (pp. 205-226). Prospect Heights, IL: Waveland.
- Duster, T. (1997). Pattern, purpose, and race in the drug war. In C. Reinerman & H. G. Levine (Eds.), *Crack in America: Demon drugs and social justice* (pp. 260-287). Berkeley, CA: University of California Press.
- Eberhardt, J. L., Davies, P. G., Purdie-Vaughns, V., & Johnson, S. L. (2006). Looking deathworthy: Perceived stereotypicality of black defendants predicts capital-sentencing outcomes. *Psychological Science*, *17*, 383-386.
- Eberhardt, J. L., Goff, P. A., Purdie j., V., & Davies, P. G. (2004). Seeing black: Race, crime, and visual processing. *Journal of Personality and Social Psychology*, *87*, 876-893.
- French, K., Finbiner, R., & Duhamel, L. (2002). *Patterns of substance abuse among minority youth and adults in the United States: An overview and synthesis of national survey findings*. Fairfax, VA: Center for Substance Abuse Treatment.

- Galea, S., Ahern, J., Tardiff, K., Leon, A., Coffin, P. O., Derr, K., et al. (2003). Racial/ethnic disparities in overdose mortality trends in New York City, 1990–1998. *Journal of Urban Health: Bulletin of the New York Academy of Medicine*, 80, 201-211.
- Golub, A., Johnson, B. D., & Dunlap, E. (2007). The race/ethnicity disparity in misdemeanor marijuana arrests in New York City. *Criminology and Public Policy*, 6, 131-164.
- Goode, E. (2002). Drug arrests at the millennium. *Social Science and Public Policy*, 39, 41-45.
- Goode, E. (2007). *Drugs in American society*. New York, NY: McGraw Hill.
- Hagan, J. (1994). *Crime and disrepute*. Thousand Oaks, CA: Pine Forge Press.
- Haney Lopez, I. (2000). Institutional racism: Judicial conduct and a new theory of racial discrimination. *Yale Law Review*, 109, 1717-1884.
- Human Rights Watch. (2008). *Targeting blacks: Drug law enforcement and race in the United States*. New York, NY: Human Rights Watch.
- Human Rights Watch. (2009). *Decades of disparity: Drug arrests and race in the United States*. New York, NY: Human Rights Watch.
- Hurwitz, J., & Peffley, M. (1997). Public perceptions of race and crime: The role of racial stereotypes. *American Journal of Political Science*, 41, 375-401.
- Johnston, L. D., O'Malley, P. M., Bachman, J. G., & Schulenberg, J. E. (2011). *Demographic subgroup trends for various licit and illicit Drugs, 1975–2010*. Ann Arbor, MI: Institute for Social Research.
- Krieger, L. H., & Fiske, S. T. (2006). Behavioral realism in employment discrimination law: Implicit bias and disparate treatment. *California Law Review*, 94, 997-1062.
- Lynch, M. (2011). Crack pipes and policing: A case study of institutional racism and remedial action in Cleveland. *Law & Policy*, 33, 179-214.
- Males, M., & Macallair, D. (2010). *Scapegoating immigrants: Arizona's real crisis is rooted in state residents' soaring drug abuse*. San Francisco, CA: Center on Juvenile and Criminal Justice.
- Mitchell, O. (2005). A meta-analysis of race and sentencing research: Explaining the inconsistencies. *Journal of Quantitative Criminology*, 21, 439-466.
- Moore, W., Pedlow, S., Krishnamurty, P., & Wolter, K. (2000). *National Longitudinal Survey of Youth 1997 (NLSY97): Technical sampling report*. Washington, DC: National Opinion Research Center.
- Office of National Drug Control Policy. (1989). *National drug control strategy*. Washington, DC: Office of National Drug Control Policy.
- Musto, D. F. (1999). *The American disease: Origins of narcotic control*. New York, NY: Oxford.
- Payne, B. K. (2001). Prejudice and perception: The role of automatic and controlled processes in misperceiving a weapon. *Journal of Personality and Social Psychology*, 81, 181-192.
- Provine, D. M. (2007). *Unequal under the law: Race in the war on drugs*. Chicago, IL: University of Chicago Press.
- Quillian, L., & Pager, D. (2001). Black neighbors, higher crime? The role of racial stereotypes in evaluations of neighborhood crime. *American Journal of Sociology*, 107, 717-767.
- Racial Disparity Initiative. (2002). *Defining the disparity-taking a closer look: Do drug use patterns explain racial/ethnic disparities in drug arrests in Minnesota*. Minneapolis, MN: Racial Disparity Initiative.
- Rabe-Hesketh, S., & Skrondal, A. (2008). *Multilevel and longitudinal models using Stata*. College Station, TX: Stata Press.
- Ramchand, R., Pacula, R. L., & Iguchi, M. Y. (2006). Racial differences in marijuana-users' risk of arrest in the United States. *Drug and Alcohol Dependence*, 84, 264-272.

- Reagan, R. (1982). *Remarks on Signing Executive Order 12368, Concerning Federal Drug Abuse Policy Functions*: The Public Papers of President Ronald W. Reagan. Retrieved from <http://www.reagan.utexas.edu/archives/speeches/1982/62482b.htm>
- Reagan, R. (1986). *Address to the nation on the campaign against drug abuse, September 14, 1986*: The Public Papers of President Ronald W. Reagan. Retrieved from <http://www.reagan.utexas.edu/archives/speeches/1986/091486a.htm>
- Singer, J. D., & Willett, J. B. (2003). *Applied longitudinal data analysis: Modeling change and event occurrence*. New York, NY: Oxford Press.
- Sniderman, P. M., & Piazza, T. (1993). *The scar of race*. Cambridge, MA: Belknap Press.
- Snyder, H. N., & Mulako-Wangota, J. (2012). *Drug arrest rates of juveniles by race, 1980–2009*. Generated using the Arrest Data Analysis Tool. Washington, DC: Bureau of Justice Statistics. Retrieved August 11, 2012, from [www.bjs.gov](http://www.bjs.gov)
- Spohn, C. (2000). Thirty years of sentencing reform: The quest for a racially neutral sentencing process. In J. Horney (Ed.), *Policies, processes, and decisions of the criminal justice system: Criminal justice 2000* (pp. 427-501). Washington, DC: National Institute of Justice.
- Substance Abuse and Mental Health Services Administration. (2011). *Drug abuse warning network, 2009: National estimates of drug-related emergency department visits* (Vol. HHS Publication No. (SMA) 11–4659, DAWN Series D-35). Rockville, MD: Substance Abuse and Mental Health Services Administration.
- Substance Abuse and Mental Health Services Administration. (2012). *National survey on drug use and health, 2009*. Generated using the Analyze Online Tool. Rockville, MD: Substance Abuse and Mental Health Services Administration. Retrieved August 11, 2012, from ([www.icpsr.umich.edu/icpsrweb/SAMHDA/](http://www.icpsr.umich.edu/icpsrweb/SAMHDA/))
- Tonry, M. (1995). *Malign neglect: Race, crime, and punishment in America*. New York, NY: Oxford University Press.
- Tonry, M. (2011). *Punishing race: A continuing American dilemma*. New York, NY: Oxford University Press.
- Watt, T. T. (2008). The race/ethnic age crossover effect in drug use and heavy drinking. *Journal of Ethnicity in Substance Abuse*, 7(1), 93-114.
- Western, B. (2006). *Punishment and inequality in America*. New York, NY: Russell Sage Foundation.