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Ethnoracial differences in workplace drug testing and policies on positive drug tests in the United States

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Abstract

Background: Drug testing is widely implemented as a work-based prevention strategy for employee substance use. However, it has raised concerns about its potential use as a punitive measure in the workplace where racialized/ethnic workers are over-represented. This study examines the rates of exposure to workplace drug testing among ethnoracial workers in the United States and the potential differences in the employers' responses to positive test results.

Methods: A nationally-representative sample of 121,988 employed adults was examined using the 2015–2019 National Survey on Drug Use and Health data. The rates of exposure to workplace drug testing were estimated separately for ethnoracial workers. Then we used multinomial logistic regression to test differences in employers' responses to the first positive drug test results across ethnoracial subgroups.

Results: Since 2002, Black workers reported 15–20% points higher rates of having a workplace drug testing policy than Hispanic or White workers. When tested positive for drug use, Black and Hispanic workers were more likely to be fired than White workers. When tested positive, Black workers were more likely to be referred to treatment/counseling services while Hispanic workers were less likely to be referred compared to White workers.

Conclusion: Black workers' disproportionate exposure to drug testing and punitive responses in the workplace may potentially place individuals with substance use problems out of the workforce, limiting their access to treatment/other resources available via their workplaces. Also, Hispanic

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CRedit authorship contribution statement

Dr. Oh lead study conceptualization and co-led statistical analyses and writing. Mr. James Hodges co-led statistical analyses and writing. Drs. Salas-Wright and Goings contributed to the study conceptualization and development of the data analytic plan as well as the writing and editing of the entire manuscript. Ms. Smith co-led the writing of the manuscript and contributed to the editing of the entire manuscript. All authors have read and approved the submission of this manuscript to *Drug and Alcohol Dependence*.

Appendix A. Supporting information

Supplementary data associated with this article can be found in the online version at doi:10.1016/j.drugalcdep.2023.109898.

Declaration of Competing Interest

No conflict declared.

workers' limited accessibility to treatment and counseling services when tested positive for drug use requires attention to address unmet needs.

Keywords

Workplace drug testing; Employer policy on a positive drug test; Racialized group/ethnicity; Job termination; Service referrals; United States

1. Introduction

The use of drug testing in the workplace is controversial for its potential legal ramifications, especially outside the safety-sensitive industries where more stringent drug use policies are required under the Drug-Free Workplace Act of 1988 or other federal guidelines (Phan et al., 2012). However, it continues to draw interest as a work-based strategy to reduce employees' substance use (Oh, 2023). The attention was partly driven by the anxiety about the rising illicit drug use in the 1980s in the United States and the perceived need to identify the workforce who use illicit drugs (Phan et al., 2012). Following the passage of the Drug-Free Workplace Act, requiring federal grant recipients/contractors to establish and maintain a drug-free workplace policy, 40–45% of U.S. workers reported the use of drug testing in their workplaces, and nearly 30 million workers were tested for illicit drug use (Carpenter, 2007; Flynn, 1999; Larson et al., 2007).

There is evidence that workplace drug testing reduces workplace substance use, although there are debates about the methodological rigor of previous studies (Pidd and Roche, 2014). The wide implementation of workplace drug testing has raised concerns, especially regarding its potentially negative consequences for racialized/ethnic workers¹ (Provine, 2008; Western, 2006). Research showed that higher rates of Black workers reported drug testing in their workplaces even when the differences were examined within occupations (Becker et al., 2014; Carpenter, 2007). While less is known about Hispanic workers' exposure, greater usage of drug testing in safety-sensitive industries (e. g., construction, mining) and Hispanic workers' over-representation in those industries implies that they are also more likely to be subject to drug testing than White workers (Pidd et al., 2016; Seabury et al., 2017). If drug testing is used to merely prohibit drug use without providing support for abstinence and recovery from drug use, it is less likely to contribute to substance use prevention while potentially adversely affecting racialized/ethnic workers' success in the workplace (Pidd et al., 2016).

Continued demographic shifts (e.g., increasing Hispanic populations) and economic restructuring suggest the need to understand the nature and extent of exposure to workplace drug testing, especially for different ethnoracial groups (Bonvillian, 2017; Passel et al., 2022). Additionally, evidence is lacking about employers' policies for positive drug tests, which have important implications for workers' success in the labor market and substance

¹The American Psychiatric Association (APA; 2022) acknowledges the socially constructed nature of race and thus recommends using language that challenges the view that races are discrete and natural entities. In keeping with the changes in the Diagnostic and Statistical Manual of Mental Disorders (DSM)–5-TR (APA, 2013), we used the terms, “racialized” (instead of “race” or “racial”) and “ethnoracial” (to denote all categories of ethnic and racialized identifiers). <https://doi.org/10.1016/j.drugalcdep.2023.109898>

use behaviors. As assistive measures are not readily available in small businesses with limited resources, greater drug testing exposure might have inadvertently contributed to widening the health gaps among racialized/ethnic workers (Attridge, 2022; United States Bureau of Labor Statistics, 2021). Thus, research is needed to elucidate organizational responses to positive test results and their potential implications for the labor market and substance use outcomes among diverse population groups.

This study raised two primary research questions: Having adjusted for the proportion of their composition of the workforce, (1) Are Black and Hispanic workers over-represented in workplace drug testing relative to their White counterparts? and (2) Are there ethnoracial differences in employers' policies after a first-positive drug test? To address the questions, we examined the extent of exposure to workplace drug testing among Black, Hispanic, and White workers in the United States. Then, we tested if workplace policies on the first positive drug tests vary across the ethnoracial subgroups.

2. Methods

2.1. Data and sample

This study used data from the 2002–2019 National Survey on Drug Use and Health (NSDUH), a nationally-representative, cross-sectional survey of non-institutionalized US civilians aged 12+ that included items regarding the respondents' substance use, sociodemographics, and health outcomes. We used data from 2002 to 2019 to examine the ethnoracial trends in exposure to workplace drug testing policies over time. However, to ensure that we present a current snapshot of workplace drug policies, we restricted our analyses to 2015–2019 for main analyses. The analytic sample consisted of 121,988 employed individuals aged 18+ (including 61,015 respondents whose workplaces have instituted a drug testing policy). A detailed description of NSDUH procedures is available elsewhere (Center for Behavioral Health Statistics and Quality, 2020).

3. Measures

3.1. Workplace drug testing

A binary measure (0=*no*, 1=*yes*) was used to examine whether the respondent's workplace ever tested its employees for illicit drug use.

3.2. Workplace policy on the first positive drug test

Respondents were asked, "According to the policy at your workplace, what happens to an employee the first time he or she tests positive for illicit drugs?" Possible responses included *fired*, *referred for treatment/counseling*, *handled on an individual basis/policy does not specify*, *doesn't know*, and *something else*. Based on the response options, we created a categorical variable coded as 1=*fired*, 2=*referred for treatment/counseling*, and 3=*other*. The "other" responses, mostly represented by no formal or perceived policy for the first positive drug test case, were used as the reference category to compare with the employers' more active responses.

3.3. Covariates

Our main analyses (i.e., the multinomial logistic regression models) controlled for sociodemographic characteristics and past-year illicit drug use disorder (IDUD) status. The sociodemographic controls were age (*18–25, 26–34, 35–64*), gender (*male, female*), ethnoracial identity (Black, Hispanic, White), educational attainment (*less than high school, high school, some college, college or higher*), annual household income (*less than \$20,000, \$20,000–\$39,999, \$40,000–\$74,499, \$75,000+*), employment status (*full- or part-time*), marital status (*married, separated/divorced/widowed, never married*), and urbanicity of residence (*Core-Based Statistical Area [CBSA] with 1+ million population, CBSA with less than 1 million population, non-CBSA*).

4. Analytic strategy

Statistical analyses were conducted in four steps. First, we estimated the rates of respondents having a drug testing policy in their workplaces since 2002, separately for Black, Hispanic, and White employees. The trends were tested using logistic regression analysis while controlling for the covariates. Second, we used binary logistic regression to examine potential differences in sociodemographic characteristics between individuals with and without a workplace drug testing policy in 2015–2019. Lastly, we used multinomial logistic regression to assess the relationship between ethnoracial identity and employers' policies on the first positive drug test result. Specifically, we examined whether having a Black or Hispanic identity (compared to White) raises or lowers the relative risks of being fired and being referred for treatment/counseling to the “other” responses. Additionally, predicted probabilities of the employers' responses on the first positive drug test result were computed separately for each ethnoracial subgroup. All estimates were weighted to account for the NSDUH's complex sampling design (Substance Abuse and Mental Health Data Archive, 2014).

5. Results

5.1. Trends in the workplace drug testing

Fig. 1 depicts the annual rates of employees whose workplaces conduct drug testing since 2002. During the study period, 61%–72% of Black workers reported drug testing in their workplaces, which was 15–20% points higher than their Hispanic and White counterparts. When examined by gender, men report 5–10% points higher rates than females. The linear trend lines indicate gradual increases for all ethnoracial groups and genders. Test of trends suggested that the increases were statistically significant, ranging from AOR=1.013 (for Hispanic males and Black females) to AOR=1.022 (for White females).

In 2015–2019, 50.6% of employed individuals reported having a workplace drug testing policy (see Supplemental Table 1). We found a higher likelihood of having a workplace drug policy for men, individuals of ages 34 or below, Black employees, and those with lower educational attainment. On the other hand, individuals with low annual household income (especially those with annual household earnings of less than \$20,000), part-time

employees, and individuals with a past-year IDUD were less likely to have a drug testing policy at their workplaces (Table 1).

6. Policy on first positive drug test results

Among U.S. workers with a workplace drug testing policy, we found that 40.6% (95% CI=40.1–41.1) would be fired and 18.2% (95% CI=17.7%–18.6%) would be referred for treatment/counseling services when tested positive for drug use. When the employers' responses were examined by ethnoracial identities, our models indicated that the relative risks of getting fired to the "other" responses were 1.563 (95% CI=1.445–1.689) times higher for Black workers and 1.372 (95% CI=1.258–1.496) times higher for Hispanic workers compared to White workers. Interestingly, Black workers were also 1.419 (95% CI=1.256–1.603) times more likely to be referred for counseling/treatment while Hispanic workers were 0.797 (95% CI=0.727–0.879) times likely to be referred for services than White workers. These estimates suggest that 45.7% of Black and 46.8% of Hispanic workers were likely to get fired when tested positive for drug use, significantly higher than White workers (37.7%). For treatment/counseling referrals, 13.0% of Hispanic workers were likely to be referred, significantly lower than Black (19.8%) or White (17.9%) workers.

7. Discussion

We found that drug testing has been a common workplace approach for substance use prevention among employees since early 2000. Currently, over half of all working individuals have a drug testing policy in their workplace. Regarding our first research question, Black individuals, but not Hispanic, were more likely to have drug testing in their workplaces than White individuals. This may be partly related to the fact that Black workers are overrepresented in safety-sensitive workplaces (transportation) and the public sector where formal substance use policies and resources are required by federal laws and guidelines (Cooper et al., 2012; Flynn, 1999; Phan et al., 2012; U.S. Bureau of Labor Statistics, 2022). Our sensitivity check using the NSDUH 2010–2014 data (that collected the basic industry and occupation information) partly supported this claim. That is, controlling the types of industry and occupation of the work respondents do resulted in a small decrease in the likelihood of having workplace testing among Black workers, indicating that the industry and occupation information partially explain Black workers' greater exposure to workplace drug testing (See Supplemental Table 2).

Concerning our second research question, Black and Hispanic workers were more likely to get fired on their first positive drug test than White workers. This finding is particularly noteworthy for Black workers given their greater likelihood of getting tested for drug use than other racialized/ethnic groups. Black workers' greater risk of getting fired for their first positive drug test raises public health concerns because placing individuals with substance use problems out of the workforce would further limit their access to treatment opportunities and other resources (e.g., health insurance) available via workplaces. For Hispanic workers, limited access to treatment/counseling services through their work when tested positive for drug use requires special attention. Given the increased substance-related problems among workers in the safety-sensitive industries where Hispanic and Black

workers are over-represented, ensuring better access to substance use treatment is important to alleviate unmet needs for substance-related problems (Bush and Lipari, 2015; Seabury et al., 2017). Such considerations may include helping employers (especially small businesses) address barriers to implementing employee support services, such as financial constraints, confidentiality, and scheduling restrictions (Carney and Knoepke, n.d.).

There are limitations to note. First, self-reported responses on workplace drug testing policy may be subject to bias as some individuals, especially those who do not use substances and those who are less likely to come across such policies, may not accurately understand and report their workplace policies on substance use. This indicates that our estimates of workplace drug policy may be underestimated. Future studies should seek to include supervisors or human resource representatives in their samples. In addition, the NSDUH data did not allow for further examination of workplace contexts to better understand the ethnoracial differences in drug use and drug testing policies in the workplace (Frone, 2006; Park and Minnick, 2023). Future research examining the industry-, occupation-, and firm-specific drug use and workplace policy contexts may offer a salient understanding of ethnoracial differences in drug testing policy implementation.

Despite the limitations, it adds to the literature about the nature, extent, and consequences of workplace drug testing. Our findings on potential ethnoracial disparities (i.e., higher likelihood of getting tested and fired among Black workers and limited referral to adequate treatment/counseling among Hispanic workers) may further widen the health gaps, raising equity concerns. Along with a further examination of occupational contexts across diverse racialized/ethnic populations, efforts to promote equitable workplace policies are needed to reduce disproportionate risks of being tested for drug use and fired when tested positive among Black workers and improve access to substance use treatment/counseling among Hispanic workers.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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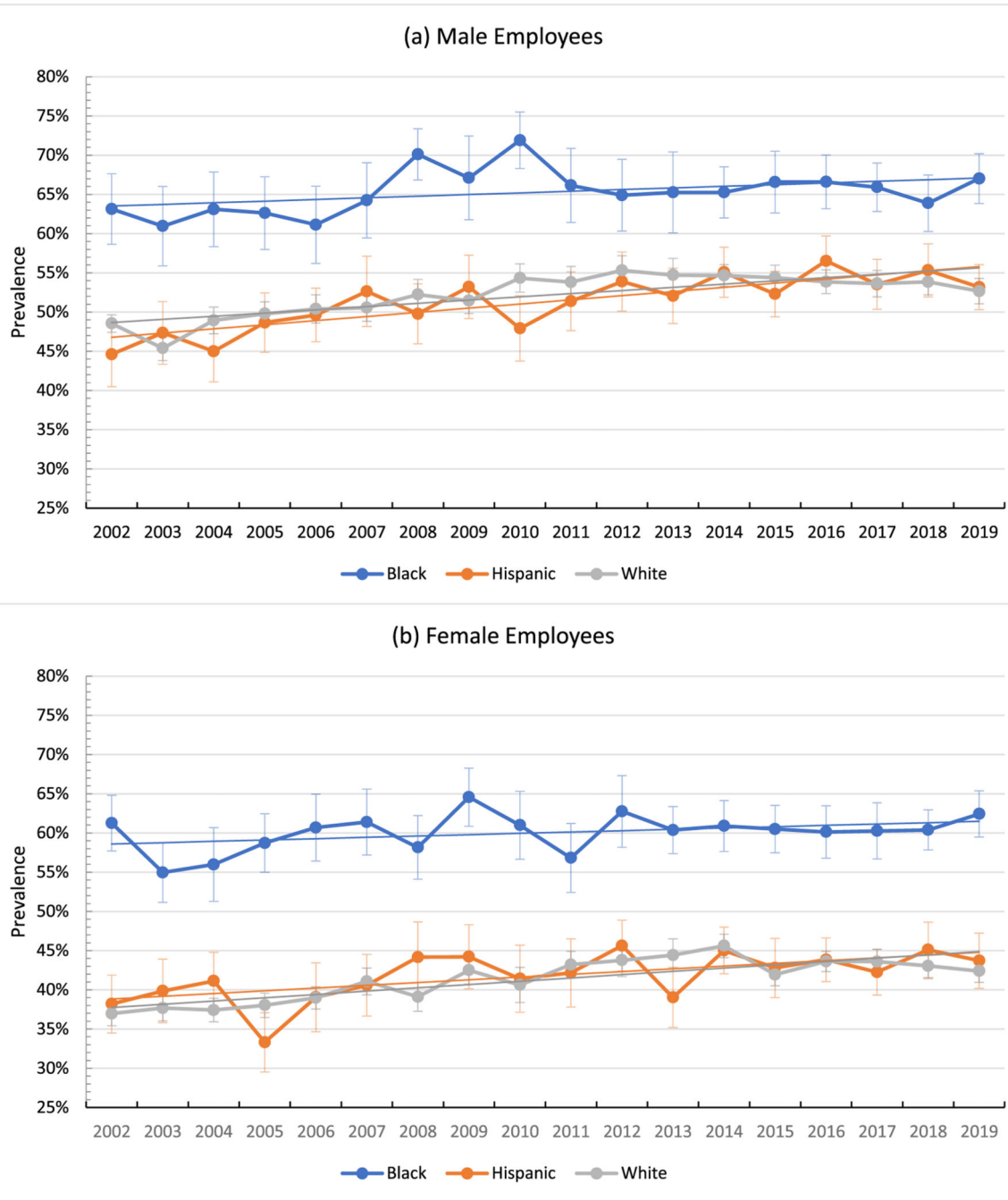


Fig. 1. The proportions of individuals (aged 18–64) employed at workplaces testing employee’s drug use by race/ethnicity and gender: National Survey on Drug Use and Health 2002–2019. *Note.* Linear lines indicate the linear trends of the rates of individuals in the workplaces testing for employees’ drug use by racialized group/ethnicity.

Table 1

Multinomial logistic regression of workplace policy on the first positive drug test, National Survey on Drug Use and Health 2015–2019.

	Fired (<i>n</i> = 17,615; 47.51%)		Referred for Treatment/Counseling (<i>n</i> = 9519; 18.2%)	
	RRR	95% CI	RRR	95% CI
Gender				
Male	1.176	1.126–1.227	1.216	1.131–1.308
Female	1.000	-	1.000	-
Age				
18–25	1.410	1.317–1.509	0.512	0.457–0.573
26–34	1.304	1.223–1.390	0.758	0.706–0.813
35–64	1.000	-	1.000	-
Ethnoracial identity				
Black	1.563	1.445–1.689	1.419	1.256–1.603
Hispanic	1.372	1.258–1.496	0.797	0.727–0.879
White	1.000	-	1.000	-
Educational attainment				
Less than high school	2.458	2.251–2.683	1.239	1.074–1.430
High school	2.110	1.982–2.246	1.479	1.352–1.618
Some college	1.708	1.598–1.827	1.401	1.277–1.537
College or higher	1.000	-	1.000	-
Annual household income				
<\$20,000	1.255	1.136–1.386	0.560	0.474–0.663
\$20,000–39,999	1.203	1.122–1.290	0.622	0.561–0.690
\$40,000–74,999	1.114	1.049–1.184	0.785	0.720–0.856
\$75,000+	1.000	-	1.000	-
Employment status				
Full-time	1.000	-	1.000	-
Part-time	0.814	0.756–0.876	0.675	0.608–0.749
Marriage status				
Married	1.000	-		
S/D/W	0.991	0.904–1.085	1.114	1.006–1.234
Never married	0.887	0.828–0.951	0.911	0.818–1.013
Urbanicity				
CBSA w/pop. > 1 mil	1.000	-	1.000	-
CBSA w/pop. < 1 mil	1.199	1.135–1.267	1.104	1.032–1.180
Non-CBSA	1.498	1.343–1.671	1.254	1.076–1.461
Illicit drug use disorder				
No	1.000	-	1.000	-
Yes	0.947	0.801–1.119	0.798	0.628–1.014

Notes. The reference category is other (*n* = 24,926; 41.2%) which includes no policy exists, handled on an individual basis, and nothing happens. Relative risk ratios were adjusted for gender, age, ethnoracial identity, educational attainment, annual household income, employment status,

marital status, urbanicity, and past-year illicit drug use disorder status. Relative risk ratios in bold are statistically significant at $p < 0.05$. All prevalence estimates were weighted to account for NSDUH's complex sampling design.

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