A current re-examination of racial/ethnic disparities in the use of substance abuse treatment: Do disparities persist?

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Abstract

Objective: Racial/ethnic disparities in the use of substance abuse treatment services have been documented. The objective of this study was to re-examine if racial/ethnic disparities in the use of treatment still exist using current data collected post-implementation of the Affordable Care Act.

Methods: Data were pooled from the National Survey on Drug Use and Health survey years 2015, 2016, and 2017. Analyses were limited to adult White, Black, and Latino participants who met DSM-IV criteria for a pastyear substance use disorder (n = 12,070). Hierarchical multivariate logistic regression models examined the role of race/ethnicity on past-year use of (1) any substance abuse treatment services and (2) specialty treatment. Important covariates included socio-demographics, problem severity, and perceived treatment need. A subanalysis was also conducted that was limited to participants who reported having health insurance to explore the role of insurance status on treatment utilization by race/ethnicity.

Results: Findings showed that Latinos and Blacks significantly underutilized specialty treatment relative to Whites. These relationships were statistically significant after controlling for socio-demographic characteristics, problem severity, and perceived treatment need. However, when analyses were limited to only those with health insurance, Black-White disparities became non-significant, while Latino-White disparities persisted.

Conclusions: Findings highlight that Black-White and Latino-White disparities in the use of substance abuse treatment still persist. However, Black-White disparities may be limited to only those who are uninsured. Public health implications are discussed.

Keywords

Specialty treatment; Racial/ethnic disparities; Treatment utilization; Latinos; Blacks; Substance use disorders

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1. Introduction

Disparities in alcohol and drug problems among Whites, Blacks, and Latinos have been well documented. A considerable evidence base suggests that Blacks and Latinos disproportionally experience greater problems (e.g., negative social consequences, legal problems, greater number of dependence symptoms, re-occurring dependence) despite reporting a lower prevalence of substance abuse disorders (SUD) than Whites (Caetano, 2003; Galea et al., 2003; Mulia et al., 2009; Witbrodt et al., 2014; Zemore et al., 2013). A viable strategy to reducing racial/ ethnic disparities related to substance abuse is to increase utilization of specialty substance abuse treatment services (Arroyo et al., 1998; Lowman and Le Fauve, 2003; Schmidt et al., 2006). Specialty treatment refers to formal programs specifically designed to treat SUD (e.g., rehabilitation, in/out patient services). However, not only are specialty treatment services severely underutilized by those with SUD, Blacks and Latinos may be less likely to use them than their White counterparts. Population-based studies have consistently found Latino-White disparities in the use of specialty treatment (Alegria et al., 2004; Alegria et al., 2011; Chartier and Caetano, 2011; Guerrero et al., 2013; Schmidt et al., 2007; Zemore et al., 2014). Disparities among Blacks and Whites have been less consistent. Some studies have found that Blacks are less likely than Whites to use specialty treatment, while other have found no differences or that disparities only exist at higher levels of problem severity or are limited to only women (i.e., between Black and White women) (Chartier and Caetano, 2010; Hatzenbuehler et al., 2008; Lê Cook and Alegría, 2011; Schmidt et al., 2007; Zemore et al., 2014). Overall, increasing utilization of specialty treatment services is an important public health strategy to reduce morbidity and mortality stemming from substance abuse and resulting racial/ethnic disparities.

Access to specialty treatment services has significantly increased over the past decade as a result of important reforms to systems of care that have been enacted. For instance, the 2008 Mental Health Parity and Addiction Equity Act (MHPAEA) required equitable coverage for mental health and substance abuse services as other general medical services by health insurance plans (Beronio et al., 2014a). The MHPAEA substantially reduced treatment-related barriers (e.g., higher co-pays, limitations on the number of and length of covered visits) associated with mental health and specialty treatment for SUD. Further, the passage of the 2010 Affordable Care Act (ACA) expanded coverage for substance abuse treatment services to more than 62 million Americans, thereby enhancing access to specialty treatment (Ali et al., 2016; Beronio et al., 2014b; Buck, 2011). Such reforms likely influenced treatment-seeking behaviors. A recent study using 2008–2014 data from the National Survey on Drug Use and Health (NSDUH) examined how health insurance status, treatment use, and barriers to care differed among persons with opioid use disorders before and after the implementation of the ACA (McKenna, 2017). This study found that persons with opioid use disorders were significantly more likely to be insured, use treatment services, report that their insurance paid for treatment, and less likely to report financial barriers to treatment after the implementation of the ACA as compared to pre-ACA. This study did not assess differences by race/ethnicity.

Notably, insurance coverage has significantly increased among Blacks and Latinos due to the ACA (Creedon and Cook, 2016; McMorrow et al., 2015), which may be vital in

increasing access to specialty treatment among those with SUD (Clemans-Cope et al., 2012). Recent national studies have found that uninsured rates among Whites, Blacks, and Latinos have narrowed since the passage of the ACA (Lowman and Le Fauve, 2003; McMorrow et al., 2015). Compared to 2012, insurance rates in 2014 decreased from 43% to 32% among Latinos, from 26% to 17% among Blacks, and from 16% to 11% among Whites (McMorrow et al., 2015). Another study comparing 2005–2007, 2011–2013, and 2014 NSDUH data found that among persons with serious psychological distress or SUD, Latinos and Blacks were more likely to be insured in 2014 than in previous years (Creedon and Cook, 2016). Thus, persons with SUD have benefited from increased insurance coverage. However, this study also found that relative to their White counterparts, Latinos and Blacks were less likely to report being insured (Creedon and Cook, 2016). Further, no significant changes in the use of specialty treatment were found among those with SUD across all years for all racial/ethnic groups. Thus, it is unclear if increased insurance coverage has resulted in an increased use of substance abuse treatment services.

Another recent study compared the use of any past-year substance abuse treatment among those who reported heavy drinking or an alcohol use disorder (AUD) by race/ethnicity before and after the ACA, using 2008–2009 and 2011–2014 NSDUH data. This study found that despite some improvements in the use of SUD treatment services overall, Latinos and Blacks still continued to lag behind their White counterparts (Manuel, 2017). Importantly, this study and aforementioned studies assessed early implementation of the ACA by using 2014 NSDUH data—the first year the ACA was fully implemented. This timeframe may not have been a long enough time period to assess the full effect of the ACA on substance abuse treatment utilization. Additionally, depending on when participants were interviewed in 2014, participants' reported treatment use might have occurred in 2013, before the full implementation of the ACA. Thus, continued examination of treatment utilization rates beyond 2014 by race/ethnicity is warranted.

The current study builds on the existing evidence base by examining racial/ethnic disparities in the use of treatment services with data that extends well beyond the 2014 full implementation of the ACA. Using 2015–2017 NSDUH data should account for any lagged effects, such as newly insured individuals who may have required more time to identify needing treatment, get acquainted with their insurance benefits (i.e., what services were covered), and finding treatment services. The objective of this analysis is to determine if racial/ethnic disparities in the use of (1) any substance abuse treatment services and (2) specialty treatment continue among adult White, Black, and Latino participants with SUD.

2. Methods

2.1. Data and study population

Data was derived from the NSDUH, which is sponsored by the Substance Abuse and Mental Health Services Administration (SAMHSA). The NSDUH is a nationally representative, cross-sectional study that collects data on alcohol and drug use, mental health status, and other health-related issues among those 12 years of age or older residing in the United States. Participants are recruited via multistage probability sampling of the 50 states and District of Columbia. The NSDUH has been administered annually since 1971, and de-

identified data are available for public use. More detailed information regarding study methodology is publicly available (Center for Behavioral Health Statistics and Quality, 2015, 2016, 2017). For the present analysis, data were pooled from the public use NSDUH survey years 2015, 2016, and 2017. The pooled dataset included a total sample size of 170,319 participants (2015: 57,146; 2016: 56,897; 2017: 56,276). The analytic sample was restricted to adult participants who were of White, Black, or Latino racial/ethnic descent and met DSM-IV diagnostic criteria for SUD in the past year, resulting in a total sample size of 12,070 participants.

2.2. Measures

The two outcome measures for these analyses included past-year use of (1) any substance abuse treatment service and (2) specialty treatment. Participants who reported ever using alcohol or drugs were asked if they had ever received substance abuse treatment. Those who answered affirmatively were then asked if they had received treatment for alcohol or drugs in the past year from a(n): hospital (as an in-patient), in/out-patient service at a rehabilitation facility, in/out patient service at a mental health center, emergency room, private doctor's office, prison/jail, or mutual self-help group (yes/no for each variable). Participants who answered 'yes' to any of these services were characterized as having used any substance abuse treatment service in the past year. The variable for past-year use of specialty treatment use was limited to participants who reported using in/out patient services from a hospital, rehabilitation facility, or mental health center.

Measures for past-year DSM-IV alcohol use disorder (AUD; i.e., alcohol abuse, alcohol dependence) and drug use disorder (DUD; i.e., drug abuse, drug dependence) are included in the NSDUH (for more detail regarding measurement of these variables see: Center for Behavioral Health Statistics and Quality, 2015, 2016, 2017). Those who met diagnostic criteria for an AUD and/or DUD were characterized as having SUD. Participants were also asked if they had experienced problems in the past year due to their drinking or drug use, including: (1) problems at home or school (e.g., neglecting their children, missing work or school, doing a poor job at work or school, losing a job or dropping out of school), (2) trouble with the law, (3) problems with friends and family, and (4) continued substance use despite problems with family and friends. All responses were yes/no. Affirmative responses were added and averaged to create a composite variable for problem severity where higher scores indicate greater severity. The alpha score for this variable was 0.82. Additionally, all participants in our sample were asked "In the past 12 months, did you need treatment or counseling for your alcohol or drug use?" (yes vs. no). Those who answered yes were coded as perceiving a need for treatment. Problem severity and perceived need for treatment have been consistently associated with treatment utilization (Schmidt et al., 2007; Zemore et al., 2014).

Socio-demographic covariates and contextual factors of interest included gender, age, marital status (married vs. widowed, divorced/separated, or single), employment status (employed full/part time vs. unemployed), annual family income, urbanicity (large metro area, small metro area, non-metro area), and insurance status (Medicare, Medicaid, the

Children's Health Insurance Program, military health care, or private health insurance vs. none).

2.3. Analyses

All analyses were weighted to account for the complex survey sampling design using STATA v.15 software and restricted to participants with SUD. Preliminary analyses included generating descriptive characteristics to explore racial/ethnic differences among those with SUD. Bivariate associations were tested using chi-square and t-tests. Variables that were statistically significant at p 0.05 were considered for inclusion in the final multivariate models. All final models controlled for perceived treatment need and problem severity given that these variables have been strong predictors of treatment utilization (Schmidt et al., 2007; Zemore et al., 2014). All variables considered for multivariate models were tested for collinearity and interaction. Separate hierarchical logistic regressions were conducted for the two outcomes: any substance abuse treatment and specialty treatment use in the past year. These models explored how each treatment outcome related to race/ethnicity alone (Model 1), when including socio-demographics (Model 2), and with the inclusion of problem severity and perceive treatment need variables (Model 3). Lastly, to further explore the role of insurance status on treatment utilization by race/ethnicity, the final model (Model 3) was replicated among those who reported having insurance.

3. Results

3.1. Sample characteristics

Table 1 displays weighted sample characteristics among those with SUD by race/ethnicity. Compared to Whites, Blacks and Latinos tended to be slightly younger, male, not married, report less total family income, and were less likely to have health insurance and more likely to live in a large metro city. Latinos were just as likely to be employed than Whites, whereas Blacks were more likely to be unemployed than both Latinos and Whites. Perceived treatment need was unrelated to race/ethnicity. Latinos and Blacks were slightly more likely to report higher mean scores for problem severity than Whites (1.24 vs. 1.33 vs. 1.43, respectively; p 0.001). About 11% of the sample reported any treatment use in the past year, and 7% reported using specialty treatment in the past year.

3.2. Hierarchical multivariate logistic regression models examining the role of race/ethnicity on past-year substance abuse treatment outcomes among participants with SUD

Table 2 displays findings from the multivariate models examining the role of race/ethnicity on any past-year substance abuse treatment utilization. When only race/ethnicity was included in the model, without covariates, Black-White and Latino-White disparities were nonsignificant (Model 1). However, Black-White disparities strengthened when controlling for socio-demographic characteristics (Model 2). Blacks had significantly lower odds of using any treatment in the past year than Whites (Odds Ratio (OR): 0.71; 95% Confidence Interval (CI): 0.57–0.90). In Model 3, when race/ethnicity, socio-demographics, problem severity, and perceived treatment need variables were included in the model, Blacks continued to have lower odds of reporting using any treatment in the past year than Whites

(OR: 74; 95% CI: 0.570.96). Latino-White disparities in the use of any treatment were nonsignificant across all models.

Table 3 depicts results from the multivariate models assessing the role of race/ethnicity on specialty treatment use in the past year. Results showed that racial/ethnic disparities were non-significant when covariates were not included in the model (Model 1). However, BlackWhite disparities strengthened when including socio-demographic characteristics (Model 2) and with the inclusion of problem severity and perceived treatment need (Model 3). Latino-White disparities only became significant after the inclusion of problem severity and perceived treatment need (Model 3). In Model 3, which includes all variables, Blacks were 26% and Latinos were 29% less likely than Whites to have used specialty treatment in the past year.

3.3. Multivariate logistic regression models examining the role of race/ ethnicity on past-year substance abuse and past-year specialty treatment use among insured participants with SUD

Multivariate logistic regression models from Model 3 were replicated and limited to only participants with SUD who reported having insurance (Table 4). Disparities between Black and White participants became non-significant across both outcomes. However, Latinos who were insured were significantly less likely than Whites to report using any substance abuse treatment (OR: 0.71; 95% CI: 0.53–0.95) and specialty treatment (OR: 0.72; 95% CI: 0.53–0.97) in the past year.

4. Discussion

We found that Blacks with SUD were less likely than their White counterparts to use any substance abuse treatment service and specialty treatment in the past year. This finding is consistent with studies that have found that Blacks continue to lag behind their White counterparts following the ACA (Creedon and Cook, 2016; Manuel, 2017). These results only emerged after controlling for socio-demographic characteristics, suggesting that other factors are likely driving Black-White disparities. It may be that other influences that are important to Blacks, such as stigma surrounding the use of treatment services (Scott and Wahl, 2011), may continue limiting the use of treatment services. Notably, Black-White disparities did not retain significance when analyses were limited to only those with health insurance: disparities were explained by socio-demographic characteristics and contextual factors (i.e., problem severity and perceived treatment need). Insurance coverage may be an important enabling factor for Blacks with SUD and encourage the use of treatment. In this study, Blacks with SUD were still less likely to report having insurance than their White counterparts (79% vs. 88%). Thus, improving insurance coverage, such as increased efforts to enroll uninsured and eligible Blacks in the ACA, may be a viable strategy to narrow Black-White disparities in the use of specialty treatment services.

Latino-White disparities in the use of treatment were also found. Latinos with SUD significantly underutilized specialty treatment relative to their White counterparts, similar to prior studies (Creedon and Cook, 2016; Manuel, 2017). Further, Latino-White disparities persisted even when analyses were limited to participants with SUD who reported having

health insurance. Thus, socio-demographics, contextual factors (i.e., problem severity and perceived treatment need), and insurance status did not explain Latino-White disparities. However, Latino-White disparities in the use of any substance abuse treatment service were non-significant. Studies have found that Latinos use informal (e.g., mutual help groups) or non-specialty (e.g., primary care, social services) treatment for SUD at similar rates as Whites (Chartier and Caetano, 2011; Schmidt et al., 2007; Zemore et al., 2014). Our variable for any treatment included informal and non-specialty services, which may explain this null finding. Nonetheless, why Latinos are less likely to use specialty treatment than Whites is unclear. It is highly likely that other factors that are salient or unique to Latinos may explain why they are less likely to use specialty treatment than Whites. Studies have consistently linked underutilization of treatment services among Latinos to cultural factors (e.g., perceiving treatment as not culturally tailored or acceptable) and migration-related concerns (Alegría et al., 2006; Alvarez et al., 2007; Amaro et al., 1999; Berk and Schur, 2001; Delgado, 2002; Guerrero, 2013; Guerrero et al., 2013; Hacker et al., 2011; Mendoza, 2009; Pagano, 2014; Pagano et al., 2016; Pinedo et al., 2018). However, these factors are not measured in the NSDUH, which hinders the ability to test whether they may be contributing to Latino-White disparities. Future research, especially national and comparative studies, should strongly consider assessing cultural and migration-related barriers to improve our understanding of factors that may explain why Latinos underutilize treatment relative to Whites.

Several limitations should be considered when interpreting findings from this study. Given the sensitive nature of substance use and treatment, participants may have under-reported their treatment utilization. Measures for SUD are self-reported and subject to measurement error due to social desirability. Additionally, important demographic differences among Latino-origin subgroups (e.g., Mexicans, Puerto Ricans, Cubans) may influence treatment utilization. However, due to lack of data on Latino subgroups, analyses could not explore Latino-White differences in treatment use by subgroups. Lastly, some studies have found that type of insurance (private vs. public) may differentially influence treatment utilization, which was beyond the scope of this study (Bouchery et al., 2012; Schmidt and Weisner, 2005; Weisner et al., 2002). Future studies should consider examining the role of insurance status on racial/ethnic disparities in the use of specialty treatment. Despite these limitations, the NSDUH is a well-powered dataset that provides the opportunity to examine racial/ethnic differences related to substance use and use of treatment services.

5. Conclusion

Despite improvements to increase insurance coverage and make substance abuse treatment services more accessible, racial/ethnic disparities in their use remain (Creedon and Cook, 2016). Insurance rates among Latinos and Blacks have increased since the passage of the ACA; however, they continue to be less likely to be insured and use specialty treatment relative to their White counterparts. Specialty treatment has been shown to effectively treat SUD and related harms. Increasing use of these services among Latinos and Blacks with SUD is key for reducing racial/ethnic disparities related to substance abuse. Findings suggest that prevention strategies aimed at increasing health insurance coverage among Blacks with SUD may potentially reduce Black-White disparities. Targeted outreach efforts to enroll

eligible Blacks into the ACA are critical. Results also suggest that insurance coverage alone is unlikely to increase use of specialty treatment among Latinos with SUD and narrow or eliminate Latino-White disparities. Latinos may be less inclined to seek and use treatment due to barriers unrelated to access or cost (e.g., cultural factors, migration-related concerns, stigma) (Guerrero et al., 2013, 2011; Pinedo et al., 2018). Thus, increasing use of specialty treatment services among Latinos may require culturally tailored services.

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Table 1

Selected characteristics of participants with past-year substance use disorders by race/ethnicity (weighted %, unadjusted n), National Survey on Drug use and Health, weighted n = 18,070,055, unweighted n =12,070, 2015–2017.

Variable	Total	% Whites (n = 8411)	% Blacks (n = 1555)	% Latinos (n = 2104)	P-value
Socio-demographics					
Male	63% (7128)	62% (4909)	64% (915)	70% (1304)	0.001
Age					0.001
18–25 years	27% (5620)	24% (3696)	28% (742)	35% (1182)	
26–34 years	24% (2797)	23% (1966)	24% (349)	28% (482)	
35 and over years	50% (3653)	53% (2749)	48% (464)	37% (440)	
Married	32% (2774)	35% (2135)	20% (209)	30% (430)	0.001
Employed	55% (6473)	56% (4705)	44% (667)	56% (1101)	0.001
Total Family Income					0.001
Less than $20,000	22.% (3053)	19% (1904)	38% (613)	23% (536)	
$20,000 - $49,000	29% (3849)	27% (2456)	33% (547)	39% (846)	
$50,000 - $74,000	14% (1717)	15% (1262)	11% (172)	14% (283)	
$75,000 - $100,000	35% (3451)	40% (2789)	18% (223)	25% (439)	
Insured	85% (128,740)	88% (7390)	79% (1267)	74% (1578)	0.001
Urbanicity (metro)					0.001
Large metro	57% (5579)	53% (3397)	67% (971)	68% (1211)	
Small metro	31% (4326)	33% (3224)	24% (427)	26% (675)	
Non-metro	12% (2165)	14% (1790)	9% (157)	6% (218)	
Substance use variables					
Perceived treatment need	3% (364)	3% (248)	4% (54)	3% (62)	0.41
Mean problem severity score (SD)	1.29 (2.39)	1.24 (2.05)	1.33 (2.13)	1.43 (2.23)	0.001
Past-year treatment use					
Any treatment	11% (1293)	12% (957)	10% (155)	10% (181)	0.56
Specialty treatment	7% (916)	7% (692)	7% (110)	6% (114)	0.20

Table 2

Multivariate logistic regression models examining the role of race/ethnicity on any past year substance abuse treatment utilization among participants with substance use disorders, National Survey on Drug use and Health, weighted n = 18,070,056, unweighted n =12,070, 2015–2017.

Variable	Model 1		Model 2		Model 3	
	OR	95% CI	OR	95% CI	OR	95% CI
Controlling for race/ethnicity						
Blacks (vs. Whites)	0.96	0.77–1.21	0.71 **	0.57–0.90	0.74 *	0.57–0.96
Latinos (vs. Whites)	0.88	0.70–1.11	0.83	0.66–1.06	0.81	0.62–1.05
Controlling for race/ethnicity and socio-demographic characteristics						
Male			1.19 *	1.00–1.42	1.12	0.93–1.34
Age						
26–34 Years Old			1.85 ***	1.51–2.26	1.89 ***	1.55–2.31
35 or Older			1.82 ***	1.52–2.18	1.96 ***	1.63–2.37
Married			0.62 ***	0.49–0.79	0.69 **	0.54–0.88
Employment			0.63 ***	0.52–0.77	0.73 **	0.60–0.88
Total family income						
$20,000–$49,999			0.66 ***	0.54–0.80	0.73 **	0.60–0.89
$50,000–$74,999			0.57 ***	0.43–0.74	0.62 ***	0.47–0.81
$75,000 or More			0.41 ***	0.33–0.53	0.47 ***	0.37–0.60
Insured			1.03	0.84–1.27	1.29 *	1.02–1.64
Urbanicity						
Small metro			1.08	0.91–1.28	1.10	0.92–1.31
Non-metro			0.94	0.75–1.19	0.92	0.71–1.18
Controlling for race/ethnicity, socio-demographic characteristics, problem severity, and perceived treatment need						
Problem severity					1.47 ***	1.39–1.53
Perceived treatment need					1.07	0.73–1.56

*
p < 0.05.

**
p < 0.01.

***
$p < 0.001$.

Table 3

Multivariate logistic regression models examining the role of specialty treatment utilization in the past year among participants with substance use disorders, National Survey on Drug use and Health, weighted n =18,070,056, unweighted n =12,070, 2015–2017.

Variable	Model 1		Model 2		Model 3	
	OR	95% CI	OR	95% CI	OR	95% CI
Controlling for race/ethnicity						
Blacks (vs. Whites)	1.00	0.79–1.27	0.72*	0.56–0.92	0.74*	0.56–0.99
Latinos (vs. Whites)	0.79	0.57–1.05	0.74	0.55–1.00	0.71*	0.53–0.96
Controlling for race/ethnicity and socio-demographic characteristics						
Male			1.09	0.90–1.33	0.99	0.80–1.22
Age						
26–34 years old			2.02***	1.58–2.59	2.15***	1.67–2.76
35 or older			1.76***	1.39–2.23	2.75***	1.88–4.01
Married			0.56***	0.44–0.71	1.98	1.58–2.46
Employment			0.60***	0.48–0.75	0.69***	0.55–0.86
Total family income						
$20,000-$49,999			0.59***	0.45–0.78	0.66**	0.49–0.83
$50,000-$74,999			0.55***	0.40–0.76	0.61**	0.44–0.84
$75,000 or More			0.36***	0.26–0.50	0.41***	0.30–0.56
Insured			1.06	0.83–1.36	1.33*	1.01–1.75
Urbanicity (metro)						
Small metro			1.10	0.90–1.34	1.10	0.90–1.35
Non-metro			1.02	0.77–1.34	0.98	0.73–1.32
Controlling for race/ethnicity, socio-demographic characteristics, problem severity, and perceived treatment need						
Problem severity					1.45***	1.38–1.53
Perceived treatment need					0.03	0.26–0.55

*
p < 0.05.

**
p < 0.01.

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***
$p < 0.001.$

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Table 4

Multivariate logistic regression models examining the role of race/ethnicity on any past-year substance abuse treatment and specialty treatment utilization among insured participants with substance use disorders, National Survey on Drug use and Health, weighted n = 15,313,044, unweighted n = 10,235, 2015–2017.

Variable	Any treatment		Specialty treatment	
	OR	**95% CI**	**OR**	**95% CI**
Blacks (vs. Whites)	0.82	0.62–1.01	0.86	0.65–1.16
Latinos (vs. Whites)	0.71[*]	0.53–0.95	0.72[**]	0.53–0.97
Socio-demographics				
Male	1.14	0.93–1.39	1.01	0.79–1.28
Age				
26–34 Years Old	1.75[***]	1.37–2.25	1.95[***]	1.43–2.67
35 and Older	1.93[***]	1.55–2.40	1.94[***]	1.52–2.47
Married	0.73[*]	0.55–0.96	0.61[**]	0.45–0.82
Employment	0.68[**]	0.53–0.86	0.64[***]	0.49–0.82
Total family income				
$20,000-$49,999	0.78[*]	0.62–0.99	0.72[*]	0.52–0.99
$50,000-$74,000	0.65[*]	0.46–0.91	0.65[*]	0.45–0.95
$75,000 or More	0.50[***]	0.38–0.65	0.45[***]	0.32–0.62
Urbanicity				
Small metro	1.04	0.86–1.26	1.11	0.87–1.41
Non-metro	0.87	0.65–1.16	0.97	0.68–1.39
Substance use variables				
Problem severity	1.51[***]	1.41–1.61	1.48[***]	1.39–1.58
Perceived treatment need	1.46	0.93–2.29	0.82	0.42–1.62

[*]
$p < 0.05$.

[**]
$p < 0.01$.

[***]
$p < 0.001$.