THE 2018-2020 NEW JERSEY HOUSEHOLD SURVEY ON DRUG USE AND HEALTH

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Project Overview

The 2018-2020 New Jersey Household Survey on Drug Use and Health was commissioned by the Division of Mental Health and Addiction Services (DMHAS), to monitor changing substance use and mental health trends in New Jersey adults. Data for this survey were collected through telephone interviews with a stratified, random sample of 7,145 respondents, conducted in three waves between August 2018 and February 2021. The study was administered by the Department of Psychiatry, Rutgers-Robert Wood Johnson Medical School. Data collection for the study was conducted by the survey research firm, SSRS.

Survey Highlights

Alcohol and Drug Use

- 52% of adults drank alcohol in the past 30 days: 5% drank heavily and 12% binge drank.
- 49% of residents used one or more illicit drugs in their lifetime, 17% used drugs in the last 12 months, and 11%, in the last 30 days.
- Marijuana was the most frequently reported drug of abuse, used by 16%, in the last year. Only 3% used other illicit drugs in the last year.
- Young adults aged 21-25 had the highest rates of past-year marijuana use (35%) and use of illicit drugs other than marijuana (11%) of all age groups.
- Between 2016 and 2020, past-year marijuana use rose by 55%, from 11% to 17%, with the largest increase seen among Hispanics (4% to 21%).
- Following 2017 regulations limiting opioid prescribing, past-year misuse of opioid pain medication fell by 74%, from 3.5% in 2016 to <1% in 2020.

Substance Abuse/Dependence

- 7.4% of New Jersey adults met DSM-IV diagnostic criteria for abuse or dependence on illicit drugs and/or alcohol, a rate comparable to the national average.
- Rates of abuse/dependence were especially high among young adults aged 21-25 (17.4%).
- From 2016-2020, rates of abuse/dependence remained stable overall but increased most notably in African Americans (3% to 9.5%), as well as females (2.7% to 3.6%) and those 50+ (3.2% to 5.5%).

Nicotine Use

- In 2018, 18% of adults smoked in the last 12 months and 13%, in the last 30 days.
- Between 1998 and 2018, rates of current smoking dropped from 20% to 13% overall, with the largest decrease occurring in young adults 18-25 (29% to 9%).

Mental Health and Co-Occurring Disorders

- In 2018, 7% of residents screened positive for at least one mental health problem, including anxiety (11%), depression (9%), and PTSD (8%).
- Residents with mental health problems were more likely to meet DSM-IV criteria for substance abuse or dependence than those with no mental health symptoms (20% vs. 5%).

Treatment

- Rates of addiction treatment among adults with symptoms declined between 2016-2020 (past-year treatment rates rose briefly from 10% in 2016 to 11% in 2018, then fell to 5.7% in 2020).
- Adults with alcohol problems only had the lowest past-year treatment rates (3%).
- Mental health treatment was more accessible than substance abuse treatment (in 2018, 42% vs. 11% of symptomatic adults received past-year treatment).

MAJOR FINDINGS

The first wave of the Household Survey, conducted in 2018, collected detailed information on substance use/abuse and treatment as well as on medical cannabis use, nicotine use, gambling and mental health. The 2019 and 2020 Surveys, however, were limited in scope to substance use/abuse and treatment need. Substance use/abuse and treatment data from all three survey years were combined to generate county-level estimates of treatment need for state planning purposes. The main body of the current report, as well as the first section of this Executive Summary, provide findings based on combined data from all three survey years only. In the second section of the Executive Summary, however, we summarize findings on medical cannabis use, mental health, nicotine use and gambling obtained in the 2018 Survey only. Appendix A of this report includes all charts and tables from the 2018 Survey. Additionally, full data from 2018 appear in the 2018 New Jersey Household Survey of Drug Use and Health Report.

Substance Use, Abuse and Dependence and Access to Addiction Treatment: Combined 3-Year Survey Data and Trends by Year

Substance Abuse and Dependence

- PREVALENCE BY SUBSTANCE TYPE. Combined survey data from 2018-2020 indicate that 7.4% of New Jersey adults met diagnostic criteria[1] for abuse or dependence on illicit drugs[2] and/or alcohol, including 3.7% who were substance dependent. Among those with positive screens, 4.3% abused or were dependent on alcohol only, 2.2% on drugs only and 0.9% on both alcohol and drugs.

- GENDER, RACE/ETHNICITY AND AGE. Males were twice as likely as females to abuse or be dependent on substances in the past year (10% vs. 4.9%). Rates of abuse/dependence ranged from 7%-8% across all racial/ethnic groups except Asians, who had the lowest rate of all groups (3.5%). Persons aged 21-25 had the highest prevalence of past-year abuse or dependence (17.4%) and adults aged 50 or older, the lowest (5.1%).

[1] The clinical symptoms are defined in the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders-IV (DSM-IV).

[2] "Illicit drugs" describes both illegal drugs and deliberate misuse of prescribed medications.

- NEW JERSEY COUNTY TRENDS: Rates of abuse/dependence combined for the three-year survey period varied substantially across New Jersey counties, ranging from a low of 2% in Union County to a high of 12.5% in Burlington County. Cape May, Warren, Essex and Atlantic Counties also exceeded the state mean (10% or higher). Counties with rates notably lower than the state mean included Middlesex, Camden and Hunterdon (5% or below).

- NEW JERSEY TIME TRENDS: 2016-2020. Since implementation of the 2016 updated definitions, rates of substance abuse/dependence did not change substantially across survey years, either overall or by substance. However, rates increased in certain populations more than others, especially females (2.7% to 3.6%), those aged 50 and older (3.2% to 5.5%), and African Americans, among whom rates of abuse/dependence more than tripled (3% to 9.5%).

- NATIONAL COMPARISONS. For the combined years 2018-2019, the New Jersey rate of abuse or dependence on drugs or alcohol in New Jersey was comparable to that of the nation as a whole (7.7% for both). Rates of abuse/dependence on alcohol with or without drugs were also comparable (5.5% vs. 5.7%, respectively).

Alcohol: Patterns of Use

- PREVALENCE OF CONSUMPTION. Combined 3-year survey data showed that most residents (87%) had at least one drink of alcohol in their lifetime, including 69% who consumed alcohol in the past year and 52% who drank in the past 30 days.

- GENDER, AGE, RACE/ETHNICITY AND EDUCATION. The highest rates of past 30-day alcohol consumption were found among Whites, males, adults aged 21 and older and college graduates. Thus, 57% of males and 48% of females reported past 30-day alcohol use. Similarly, past 30-day use was reported by 55%-65% of adults aged 21-49, 49% of adults 50 and older and only 26% of those aged 18-20. Whites were the most likely to report current drinking (60%) of all racial/ethnic groups and African Americans were the least likely (39%). About 46% of Hispanics and Asians drank in the past 30 days. Past 30-day drinking increased with educational status, from 29% of adults having less than a high school education to 65% of college graduates.

- FREQUENCY AND AMOUNTS. Among residents who drank alcohol in the last 30 days, most (63%) drank on only 1-5 days of the month while 13% drank on 16-30 days of the month. On days they drank, about 36% had only 1 drink or less; however, 32% drank an average of 3 or more drinks and 10% averaged 5 or more drinks.

- AGE OF ONSET. Among drinkers who ever drank alcohol in their lives, more than half (53%) reported having their first alcoholic drink before the age of 18 and nearly 20% drank before age 15. Only 21% of drinkers first drank alcohol on or after age 21.

- PROBLEM DRINKING. In the last 30 days, about 5% of all adults reported heavy drinking[3] and 12% reported binge drinking.[4]

- NEW JERSEY COUNTY TRENDS: Combined 3-year survey data showed that the prevalence of current drinking (in the past 30-days) varied across New Jersey counties, with the highest prevalence occurring in Hunterdon County (67%) and the lowest in Cumberland County (39%). Other counties with high current drinking rates (60% or more) included Morris (65%) and Somerset (60%). Other counties with low rates (under 45%) included Atlantic (44%), Hudson (44%) and Salem (43%).

- NEW JERSEY TIME TRENDS:1998-2020. Both past-year and past-30-day alcohol use declined between 1998 and 2016 (from 75% to 66% and 59% to 50%, respectively). However, after 2016, both past-year and past-30-day use increased (up to 70% and 54%, respectively, in 2020). Between 1998 and 2020, alcohol use declined or remained the same in all demographic groups except African Americans, who increased their past-30-day use from 39% to 45% and Asians, who increased past 30-day use from 40% to 49%.

- NATIONAL COMPARISONS. Combined data from 2018-2019 showed equivalent rates of recent alcohol use in New Jersey and the Nation (70% of both groups drank in the past 12-months) and slightly lower rates in New Jersey of both past-30 day use (53% vs. 55%) and heavy drinking (5% vs. 7%). However, NJ residents had substantially lower rates of binge drinking than the nation (12% vs. 26%).

Illicit Drugs: Patterns of Use

- OVERALL PREVALENCE. Approximately 49% of residents reported using one or more illicit drugs in their lifetime. Seventeen percent reported use of one or more illicit drugs in the last 12 months, and 11%, in the last 30 days.

- PREVALENCE BY DRUG TYPE. The four most frequently reported drugs with respect to lifetime use were marijuana (46%), cocaine (15%), psychotherapeutic drug misuse[5]

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[3] Five or more drinks (males) or four or more drinks (females) on the same occasion on at least 5 days in the past 30 days.

[4] Five or more drinks (males) or four or more drinks (females) on the same occasion on at least 1 day in the past 30 days.

[5] The psychotherapeutics drug category includes all the prescription-type drugs, including stimulants, pain relievers and other opiates, sedatives or sleeping pills, and tranquilizers. Misuse of these substances involves using them in a way that was not prescribed, such as using more than prescribed, or using without a prescription.

(13%) and hallucinogens[6] (11%). Club drugs were used by 7% of residents and methamphetamine and heroin by 4% or fewer. Marijuana was the drug most frequently used in the past 12 months and 30 days (16% and 10%, respectively). Past year and past 30-day use of all other drugs was reported by 3% or fewer of all residents.

- PSYCHOTHERAPEUTIC MISUSE. NJ adults reported lifetime misuse of the following individual psychotherapeutic drugs: a) opiate pain medications, like Oxycontin or Percocet (7%), b) tranquilizers (6%), c) stimulants (6%) and d) sedatives (3%).

- GENDER, AGE, RACE/ETHNICITY AND EDUCATION. Rates of illicit drug use in the last 12 months varied most markedly by age, with adults aged 21-25 reporting the highest marijuana use (35%) and use of illicit drugs other than marijuana (11%) of all age groups. Those aged 50 and older had the lowest marijuana use (8%) and use of other illicit drugs (3%). By gender, men were somewhat more likely than women to have used marijuana (18% vs. 14%) and other illicit drugs (6% vs. 3%). Use of illicit drugs also varied by educational status, with the highest rates of marijuana and other illicit drug use found among those with less than a high school education (12% and 3%, respectively), and the highest, among those with some college education (19% and 5%, respectively). There were no notable racial/ethnic differences in marijuana or other illicit drug use.

- AGE OF ONSET. Of the three illicit drugs having the highest rates of lifetime use in New Jersey – marijuana, psychotherapeutics and cocaine – marijuana had the earliest age of initiation. About 53% of lifetime marijuana users initiated use before age 18, compared to 13% of those initiating psychotherapeutic use and 20% of those initiating use of cocaine.

- POLY-DRUG USE. Among all residents, approximately 23% used multiple drugs in their lifetime and 3% used multiple drugs in the last 12 months. Among poly-drug users, the most frequently reported drugs were marijuana (86%) and psychotherapeutic drugs (58%).

- NEW JERSEY COUNTY TRENDS: Atlantic County led all counties in its rate of past year marijuana use (26%), with Gloucester and Burlington Counties being second in prevalence (21% in each). Residents of Passaic, Ocean, Hunterdon and Union Counties were the least likely to report past-12-month marijuana use (12% in each county). In terms of other illicit drug use, Bergen County had the highest rate (7%), followed by Sussex (6%), Gloucester (6%), and Hudson (6%). Residents of Warren, Middlesex, and

[6] LSD, PCP, ecstasy, other club drugs.

Union were the least likely to use illicit drugs other than marijuana in the past 12 months (less than 3% in each).

- NEW JERSEY TIME TRENDS: 2016-2020. Marijuana use increased substantially during this period, with past-year use rising from 11% in 2016 to 17% in 2020. The largest increase was seen among Hispanics (4% to 21%). At the same time, past-year use of illicit drugs other than marijuana declined somewhat, decreasing from 6% to 4%. Past-year misuse of opioid pain medication, in particular, fell from 3.5% to <1%, possibly reflecting 2017 regulatory changes limiting opioid prescribing.

- NATIONAL COMPARISONS: 2018-2019. Combined data from 2018-2019 showed that compared to the nation as a whole, New Jersey residents reported lower lifetime use of illicit drugs (48% vs. 52%), past year use (16% vs. 20%) and use in the past 30 days (10% vs. 13%). The two drugs most frequently used in the past year by New Jersey residents and the Nation were marijuana (15% and 17%, respectively) and psychotherapeutics (3% and 6%, respectively).

Treatment Access: Substance Abuse/Dependence

- TREATMENT PREVALENCE. Overall, 6% of all residents reported having ever received treatment for a substance abuse problem in their lifetimes and less than 1% reported receiving treatment in the last 12 months. Among residents who needed substance abuse treatment, 28% had received treatment in their lifetimes and 10%, in the last 12 months.

- ADDICTION TREATMENT BY SUBSTANCE OF ABUSE. Residents with alcohol problems were substantially less likely to have received formal addiction treatment than those with drug problems. Thus, 13% of residents having only an alcohol problem had ever been treated and only 3% had been treated in the last 12 months. In contrast, 50% of those with only a drug problem and 30% with both alcohol and drug problems had received treatment in their lifetime and 15% and 11%, respectively, had been treated in the last year.

- GENDER, AGE, AND RACE/ETHNICITY. Among those needing addiction treatment, African Americans were substantially more likely to have accessed treatment in the past year (17%) than Whites (9%) or Hispanics (11%). There were also age differences, with adults 50 and older and young adults 18-25 being the least likely to have received past-year treatment (9% and 10%, respectively) and those aged 35-49, most likely (13%). Past-year treatment rates were similar in men and women (11% and 10%, respectively).

- NEW JERSEY COUNTY TRENDS: Combined 2018-2020 data show wide variation across counties in rates of past 12-month substance abuse treatment among those needing treatment. The highest treatment rates were found in Monmouth and Cumberland Counties (19% each) followed by Ocean, Bergen, Essex and Salem (16% each). The lowest treatment rates were found in Morris, Gloucester, Passaic and Middlesex, where no county

residents in need reported receiving treatment in the past year. Adults in Hudson, Hunterdon and Mercer Counties also reported low treatment access rates, with 3%-5% of residents needing treatment in these counties having received it in the last 12 months.

- NEW JERSEY TIME TRENDS: 2016-2020. Past-year rates of addiction treatment among adults with symptoms rose briefly from 10% in 2016 to 11% in 2018, then fell to 5.7% in 2020).

Year One (2018) Survey Findings: Mental Health, Nicotine Use, Marijuana Use and Gambling

Mental Health and Co-Occurring Disorders

- PREVALENCE. More than 17% of residents screened positive for at least one mental health problem, including 11% who were positive for anxiety, 9% who were positive for depression, and 8% who were positive for PTSD.

- GENDER, RACE/ETHNICITY, AGE. The highest rates of positive screens were found in women (20% vs. 14% of men) and young adults under age 35 (23% vs. 15%-16% of those 35 and older). By race/ethnicity, Hispanics and African Americans had the highest likelihood of a positive screen (20% and 19%, respectively) and Asians, the lowest likelihood (12%). Sixteen percent of Whites screened positive for at least one disorder.

- OTHER DEMOGRAPHICS. Other demographic groups at high risk for a positive mental health screen included those with less than a high school education (21%), the divorced or separated (24%), the unemployed (31%) and those earning less than $25,000 per year (27%).

- CO-OCCURRING SUBSTANCE USE. Residents screening positive for mental health disorders were at high risk of also abusing substances. Compared to those with no positive mental health screens, those screening positive for anxiety, depression or PTSD were more likely to currently smoke (26%-29% vs. 10%) and to have used an illicit drug in the past year (28%-38% vs. 13%). Alcohol use was less likely to vary by mental health status, with the exception of PTSD, which more than doubled the risk of heavy drinking (9% vs. 4%).

- CO-OCCURRING SUBSTANCE ABUSE AND DEPENDENCE. Residents with one or more positive mental health screens were also more likely than those with no positive screens to meet DSM-IV criteria for substance abuse or dependence (20% vs. 5%).

Mental Health Treatment Access

- PREVALENCE. Among all adults in 2018, 31% had received formal mental health treatment at some time in their lives and 16% were treated in the last year. Among adults

with mental health symptoms, 64% received mental health treatment in their lives and 42%, in the last 12 months.

- GENDER, AGE AND RACE/ETHNICITY. Among symptomatic adults, women were more likely than men to have received it in the last year (46% vs. 37%), as were Whites relative to Hispanics and African Americans (50% vs. 35% and 27%, respectively). By age, only 28% of residents 65 years and older were treated in the last 12 months, compared to 37%-51% of those in age groups younger than 65.

- MENTAL HEALTH VS. SUBSTANCE ABUSE TREATMENT. Overall, mental health treatment was substantially more accessible to residents than substance abuse treatment (42% vs. 11% with symptoms of each disorder received it in the past year).

Nicotine Use

- PREVALENCE. Among all residents in 2018, 36% had smoked at least 100 tobacco cigarettes in their lifetimes, 18% had smoked cigarettes in the last 12 months and 13% in the last 30 days.

- GENDER, AGE, RACE/ETHNICITY AND EDUCATION. Males were slightly more likely than females to be current smokers[7] (14% vs. 12%). By age, residents aged 35-49 were the most likely to be current smokers (16%) and those aged 18-20, the least likely (4%). African Americans had the highest rate of current smoking (17%), followed by White residents (14%), Hispanics (9%) and Asians (6%). Smoking rates also differed by educational status, with adults having a high school education (20%) or less (21%) being substantially more likely to currently smoke than college graduates (6%).

- FREQUENCY AND QUANTITY OF TOBACCO CIGARETTE USE. About 9% of all residents smoked cigarettes daily and about 4% were heavy smokers who smoked a pack (20 cigarettes) per day or more.

- AGE OF ONSET. Altogether, 29% of smokers smoked tobacco cigarettes before the age of 15. About 35% first smoked between the ages of 15 and 17 and 24% between ages 18 and 20. Only 11% of smokers first smoked a cigarette after age 20. Early initiators (before age 15) were more likely than those smoking on or after age 15 to smoke heavily (17% vs. 9%).

- E-CIGARETTES, PREVALENCE. Among all residents, 14% used at least one e-cigarette in their lifetime, 9% used an e-cigarette in the last 12 months, and 6% used one in the last 30 days.

[7] Current smokers are defined as those who smoked cigarettes within the last 30 days.

- E-CIGARETTES, GENDER, AGE, RACE/ETHNICITY. The majority of lifetime e-cigarette users were under the age of 34, including 33% of 21–25-year-olds, and 27% of 26–34-year-olds and 18–20-year-olds. Only 16% of adults 35-49 and 7% of those older than 50 had ever used an e-cigarette. Men were somewhat more likely to have used e-cigarettes than women (17% vs. 11%). There were few notable differences in use by race/ethnicity.

- E-CIGARETTES, REASONS FOR USE. Overall, health-related reasons for initiating e-cigarette use rose consistently with age, increasing from 43% of 18–20-year-olds to 70% of those 50 and older. Non-health reasons (like flavor/smell) were highest among 18–21-year-olds (28%) and lowest among those 50 and over (12%).

- NEW JERSEY TRENDS. Tobacco cigarette smoking gradually declined in the years since 1998. The proportion of residents who ever smoked decreased from 46% in 1998 to 36% in 2018. Similarly, during this same time period, the proportion of residents who currently smoked decreased from 20% to 13%, with the largest decrease occurring in young adults 18-25 (29% to 9%).

- NATIONAL COMPARISONS. New Jersey rates of tobacco cigarette use remained well below national rates with respect to lifetime (36% vs. 62%), past 12-month (18% vs. 23%) and past 30-day (13% vs. 19%) smoking.

Marijuana

- MEDICINAL USE In 2018, 23% of all marijuana users reported having ever used the drug medicinally, although only 15% of medicinal users did so with a doctor's prescription.

- ATTITUDES TOWARD LEGALIZATION OF RECREATIONAL USE When asked about anticipated use if recreational marijuana were legalized, 89% of adults who had never used marijuana reported no likelihood they would purchase it legally. Among lifetime users, most (70%) felt the quantity of their consumption would not change, while 14% felt they would use more, and 13% felt they would use less.

Gambling

- PREVALENCE. In 2018, 62% of residents engaged in some form of gambling in the last 12 months, including 57% of residents who played the lottery, and 23% who gambled in a casino, on the internet, at a racetrack or somewhere else.

- FREQUENCY. In the past year, 43% of all residents gambled about once a month and 13% once a week. About 7% were frequent gamblers who gambled once a week or more. About 38% of residents never gambled in the last year.

- GENDER, AGE AND RACE/ETHNICITY. Frequent gamblers were somewhat more likely to be male (9%), over age 50 (9%), high school graduates only (10%) and retired/disabled (9%).

- GAMBLING AND SUBSTANCE USE. Gamblers were substantially more likely than non-gamblers to use substances. Thus, 22% of heavy gamblers (104+ times/year) smoked daily compared to 6% of non-gamblers. Similarly, heavy gamblers were more likely than non-gamblers to drink heavily (8% vs. 3%) and to have engaged in illicit drug use (26% vs. 13%) in the last 12 months.

CHAPTER 1

INTRODUCTION AND BACKGROUND

A. PROJECT OVERVIEW

As legal and normative frameworks surrounding substance use continue to evolve, such issues as the growing legalization of marijuana, the uptick in opioid prescribing and misuse and the increasing availability of e-cigarettes have moved to the forefront of policy planning and debate. In the midst of emerging trends in substance use, accurate measurements of need, demand, cost, and availability of resources take on ever increasing importance. To better meet these policy needs, the Division of Mental Health and Addiction Services (DMHAS) commissioned Rutgers University to conduct the 2018-2020 New Jersey Household Survey on Drug Use and Health. This survey was designed to monitor changing substance use trends, assess the mental health status of New Jersey residents and examine the need for, and access to, substance abuse and mental health treatment. Information obtained from this survey will be utilized by DMHAS to promote an integrated and rational approach to resource allocation for prevention, early intervention, treatment, and recovery support services.

The current survey represents the latest in a series of household surveys of substance use conducted in New Jersey approximately every 5-7 years since 1998. All surveys have been administered by telephone and employed similar methodologies and survey questions so that trends in substance use and abuse could be monitored over time. The survey is modeled on a comparable national survey, the National Household Survey on Drug Use and Health, (NSDUH) (Center for Behavioral Health Statistics and Quality, 2016) so that New Jersey findings can be compared with those of the nation as a whole. The current survey differs from prior surveys in that it represents the product of three rolling statewide surveys designed to be administered each year between 2018 and 2020[1]. At the end of the three-year survey period, data was aggregated across surveys to produce a statewide sample large enough to generate county-level estimates of substance abuse treatment need. Survey sample sizes varied across the three years. The 2018 Household Survey is the largest of the three surveys, sampling a total of 3,100 New Jersey adults. Sample sizes decreased in each subsequent survey year, with the 2019 Household Survey sampling 2,423 residents and the 2020

[1] Although data collection was supposed to be completed in 2020 for the third survey year, data collection spilled over into the first 3 months of 2021.

Household Survey, 1,622 residents. The sample size aggregated across the three survey years totals 7,145.

In addition to providing state-level estimates of substance abuse/dependence and treatment, the 2018 Household Survey collected detailed information on tobacco use, gambling and the mental health status of New Jersey adults. In contrast, the 2019 and 2020 Household Surveys were limited in scope to the substance use/abuse and treatment need data that is used to generate local estimates for state planning purposes. The main body of the current report provides data obtained from all three survey years only; however, in Appendix A of this report, we have included for reference purposes all charts and tables from the 2018 survey for which we were unable to collect updated data in 2019 and 2020. Additionally, full data from 2018 appear in the 2018 New Jersey Household Survey of Drug Use and Health Report.

The current study was funded by DMHAS and administered by the Department of Psychiatry, Robert Wood Johnson Medical School at Rutgers, the State University of New Jersey (Rutgers-RWJ). Rutgers-RWJ collected the survey data through a contract with SSRS, a professional survey research firm experienced in telephone and other survey techniques for collecting health and human services data on behalf of governmental and academic organizations. Rutgers-RWJ conducted the data analysis and prepared the final report.

B. SURVEY OBJECTIVES

The 2018-2020 telephone household survey included the following main objectives:

1. Assess the level of use and abuse of, and dependence on, alcohol, tobacco and illicit drugs and estimate the need and demand for treatment services among the household population in New Jersey.

2. Study correlates of substance use, abuse or dependence to help planners and policy makers make informed decisions regarding future interventions.

3. Examine New Jersey trends in the use of alcohol, illicit drugs and tobacco by comparing 2018-2020 study findings with those of earlier, comparable New Jersey surveys.

4. Compare the use and abuse of substances to comparable national estimates from the National Survey of Drug Use and Health (Center for Behavioral Health Statistics and Quality, 2017).

5. Create statewide and county-level estimates of substance use, abuse and dependence.

6. Create statewide and county-level estimates of the demand for substance abuse treatment and unmet treatment demand.

7. Assess barriers to accessing treatment services in the state.

8. Assess the prevalence of probable mental health problems in state residents, the level of co-occurrence of mental health and substance use disorders and the access to mental health treatment of those with mental health and co-occurring disorders.

9. Describe the prevalence of tobacco use in New Jersey adult residents.

C. TELEPHONE SURVEYS FOR DATA COLLECTION

Telephone surveys have proven cost-effective for social science research because the vast majority of American households have telephones, including 98.2% in New Jersey and 97.6% nationally (U.S. Census Bureau, 2000), thus allowing access to households at all social and income strata, including the housed poor. Among the many advantages of conducting surveys by telephone over traditional face-to-face surveys are reduced transportation and other costs, quicker completion of surveys, the ability to closely monitor interviewers, the possibility of minimizing data entry errors by the use of computer programs and the ease with which data are accessed even while the survey is still in progress (Mulry-Liggan and Chapman, 1982; Frey 1989).

Recently, however, the proliferation of cell phones and cell phone-only households has increasingly limited the number of people that may be reached via traditional telephone samples based on landlines exclusively. The growing number of homes which fall into the cell phone only category has made it prudent to supplement landline samples with a sample of households that rely on cell phones as their only phone. A 2009 CDC report stated that, as of 2007, 14.7% of households in the country and 8.0% of households in New Jersey are now reliant solely on cell phones and have no landline (Blumberg et al., 2007). As of 2017, the proportion of New Jersey cell phone-only households was 35.6%, the lowest in the nation (Blumberg & Luke, 2019). The low conversion of New Jersey to cell phone-only households relative to the rest of the country may relate to the older age of New Jersey residents relative to residents in other states (Blumberg et al., 2013).

D. LIMITATIONS OF THE DATA

Studies indicate serious limitations on the types of information that can be reliably collected by telephone. While useful for surveying socially accepted behaviors, the use of telephones for gathering information on sensitive (or illegal or socially unacceptable) behaviors has been shown to be poor compared to in-person interviews, conducted either through self-administered questionnaire or by direct interviewer questioning. Estimates of the use of licit substances, such as cigarettes and alcohol, however, tend to be substantially more accurate. In a study of

substance use disclosure rates that compared in-person self-administered surveys, in-person interviewer administered surveys and telephone surveys, for example, Aquilino (1994) found that in-person self-administered surveys, had the highest disclosure rate of illicit drug and alcohol use and telephone surveys, the lowest. Johnson, Hougland and Clayton (1989) also found a serious underestimation of substance use (including tobacco and illegal drugs) by university students when telephone survey data were compared with in-person interviews.

Studies also suggest that sampling methodologies used in telephone surveys which select households through random digit dialing may produce samples that are less likely to use illicit drugs than samples drawn to include households with no telephones (Aquilino, 1994). Moreover, this finding is consistent with differences observed in telephone access and drug use patterns by income (Belinfante, 2000). Similarly, Gfroerer and Hughes (1991) found that households with telephones reported much lower use of illicit drugs (9.4%) compared to those without telephones (24.9%). Households with telephones, for example, under-reported use of marijuana by about 35% and cocaine by about 55% compared to households without telephones.

In addition to the social undesirability of admitting illicit drug use and the difficulty of reaching drug-using populations by telephone, telephone surveys are also limited by the problem of measuring a relatively rare behavior. These problems often yield estimates that are inconsistent with treatment surveillance data and make it likely that illicit drug use is under-reported. The 2009 New Jersey Household Survey, for example, estimated a statewide total of 4,560 adult heroin users, yet the number of adult heroin treatment admissions in 2009 was 21,164.

Moreover, studies suggest that a key factor influencing the willingness of survey respondents to reveal socially undesirable behavior is the respondents' belief that the information they provide will remain confidential (Aquilino, 1994). As described in greater detail below, the 2016 New Jersey survey significantly modified the survey consent process to provide greater assurance of anonymity and confidentiality of information to participants. This change appears to have enhanced reporting of illegal drug behavior, which was substantially higher in the 2016 survey than in previous New Jersey surveys in which respondents were not provided the same level of assurances. As explained below, the drug use increase noted in 2016 appears to reflect these methodological changes rather than actual increases in drug use by New Jersey adults. The 2018-2020 survey included this enhanced survey consent process as will all subsequent NJ Household Surveys.

E. SUMMARY OF THE RESEARCH METHODOLOGY

Overview

Rutgers University contracted with SSRS to conduct data collection for the 2018-2020 New Jersey Household Survey. The survey was conducted via landline and cell phone with a statewide sample of New Jersey adults aged 18 and older. While combined data at the end of the

three-year survey period included representative samples of each of the 21 NJ counties sufficient to make county-level estimates of substance abuse treatment need, county samples in each individual survey year were not, by themselves, sufficiently large to permit such estimates. This current report thus presents aggregated data from all three survey years, producing a final sample size of 7,145, which is sufficient to produce estimates of treatment need at both the county and state levels. For a more detailed description of the survey methodology, see Appendix B.

The Sample

The final 2018-2020 sample consisted of a total of 7,145 respondents. The population under study was New Jersey adult residents (18 years old or above) residing in private households. Excluded were populations living in institutional residences (such as college dormitories, residential treatment settings, jails and prisons, etc.) as well as individuals who were homeless. All statements made in this report thus refer to the population or subpopulation of New Jersey householders. Demographic information on survey participants is presented below in Section G of the Introduction, "Profile of Survey Participants."

Weighting and Margins of Error

The data collected for the study were weighted to represent New Jersey's adult population with regard to age, gender, race, ethnicity and county of residence using U.S. Census Bureau 2019 American Community Survey (ACS) data. The exact weighting procedure is described in detail in Appendix B of this report.

At 95% confidence interval, a sample of 7,145 respondents produces a statewide estimate of substance abuse treatment need with a margin of error of $\pm$ 1.8 percentage points. Margins of error for the full statewide samples in Wave 1 (2018) were $\pm$ 2.3, for Wave 2 (2019), $\pm$ 2.7 and for Wave 3 (2020), $\pm$ 3.5. Margins of error were also calculated for each individual county, based on the full three-year sample. These range from $\pm$6.6 to $\pm$7.4. See Appendix B for margins of error for each of New Jersey's 21 counties.

Survey Instrument

The questionnaire used in the study represents a combination of questions modified from the National Survey of Drug Use and Health (Center for Behavioral Health Statistics and Quality, 2015), and questions added by DMHAS in consultation with Rutgers-RWJ. Supplemental questions added by DMHAS in the 2018 survey only include gambling, barriers to substance abuse treatment, e-cigarette use, use of medicinal marijuana, use of vaporizers for cigarette and marijuana smoking and mental health. Tables and charts presenting data for these 2018 topic areas is presented in Appendix A and in the separate 2018 New Jersey Household Survey Report.

Survey Topic Areas

The specific topics included in the 2018-2020 survey are:

- Lifetime experiences with alcohol use
- Lifetime experiences with non-medical use of drugs, including marijuana
- Treatment history for substance use
- Demand and unmet demand for addiction treatment services
- Barriers to substance abuse treatment (2018 survey only)
- Medicinal marijuana use, prevalence of marijuana vaping and attitudes about legalization (2018 survey only)
- Mental health status, including screening outcomes for depression, anxiety and post-traumatic stress disorder (PTSD) (2018 survey only)
- Co-Morbid mental health and substance abuse problems (2018 survey only)
- Treatment history for mental health problems (2018 survey only)
- Lifetime experiences with use of nicotine-containing products, including e-cigarettes (2018 survey only)
- Gambling experiences (2018 survey only)
- Basic demographic information, including health insurance information. (Health insurance in 2018 survey only)

Survey Administration and Data Collection Time Frames

The final version of the survey instrument was programmed into a Computer-Assisted Telephone Interview, or CATI, system. The CATI interviews were administered by professional and experienced interviewers through a subcontract with SSRS. As described above, data for the 2018-2020 surveys were collected across three survey years, or waves. Wave 1 data was collected August 8 through December 9, 2018. Wave 2 was collected July 8 through October 7, 2019. The final wave of data was collected from December 8, 2020 to February 22, 2021. Interviews were conducted in either English or Spanish, based upon the participant's preference. A more comprehensive description of the research methodology is included in Appendix B.

Additional Survey Modifications

The current survey contains other modifications which were originally made to the 2016 survey for the purpose of enhancing truthfulness of reporting and aligning the New Jersey

survey more closely with the NSDUH. These changes, which were described in detail in the 2016 Household Survey report, involved an enhanced informed consent process, rewording of questions to match more closely those of the NSDUH and modification of the algorithm for calculating substance abuse and dependence to align with that of the NSDUH more closely.

F. REPORT ORGANIZATION

This report includes combined data from only those survey questions administered in all three survey years. The only sections in which combined data are not presented are those sections examining statewide trends across surveys years, in which case the data are broken out by year. Charts and tables presenting data collected **only** in Year 1 (2018) is provided in Appendix A and full 2018 Survey data are presented in the 2018 New Jersey Household Survey Report.

The present report is organized into seven chapters. Following the Introduction, Chapter 2 examines alcohol use and characteristics of users with a focus on frequency, quantity, and age of first use. Chapter 3 examines illicit drug use, including the use of marijuana and both illicit and non-medical use of prescription drugs, highlighting demographic characteristics of users, age of first use, and frequency of use. Chapter 4 provides statewide estimates of substance abuse, dependence, and treatment access. Patterns of addiction treatment utilization, as well as levels of treatment need, demand, and access in the population as a whole and among those needing treatment are examined, as well as associations between early use (before age 18) of alcohol and marijuana and the subsequent development of substance abuse and dependence. Chapter 5 provides county variations in alcohol, marijuana use, illicit drug use and substance abuse and dependence. Chapter 6 examines substance use and addiction treatment trends from the 1998, 2003, 2009, 2016, 2018, and 2019 Surveys, with time frames selected for comparison according to the comparability of the variables of interest across survey years. For example, because it is assumed that changes in survey methodology would have a negligible impact on the reporting of alcohol use, trends in alcohol use are reported from 1998-2020. However, as described above, methodological changes in 2016 were expected to have their greatest impact on the reporting of illicit drug use. As a result, drug use trends are reported for 2016-2020 only. In Chapter 6 we also compare findings on substance use, abuse and dependence in the current survey to the 2018 and 2019 (combined) findings from the National Survey of Drug Use and Health (Center for Behavioral Health Statistics and Quality, 2020), the latest years for which national data were available at the time of this report. Finally, Chapter 7 draws conclusions and describes policy implications from findings of the current survey.

Most chapters include tables and charts presenting demographic breakdowns of substance use behaviors -- that is, the different frequencies of responses given by various sub-groups of the population regarding their substance use behavior. Typically, these differences are reported by gender, age, race/ethnicity and education status. When comparing responses of sub-groups of the population, readers must note that the number of study participants in some groups is small which results in larger standard error estimates and wider confidence intervals for the resulting

percentages. Moreover, small subgroups, such as Asian race/ethnicity, have been omitted from some analyses if it was determined that there were insufficient numbers to produce reliable results. Similarly, fewer than 1% of respondents identified themselves as gender non-conforming, so these individuals were of necessity omitted from the analyses.

This report is accompanied by appendices providing more detailed information about the 2018-2020 Surveys. Charts and tables for data collected only in the 2018 survey year are presented in Appendix A. A detailed description of the survey methodology and study weighting process is presented in Appendix B. The full study survey instrument, which contains all survey questions asked in 2018 and the subset of questions asked in 2019 and 2020, is provided in Appendix C. All data presented in tables and charts in this report are based on the weighted sample.

G. PROFILE OF STUDY PARTICIPANTS

Demographic Characteristics

Table 1-1 presents an overview of the demographic characteristics of survey participants. As region, gender, age, and race/ethnicity were part of the weighting scheme utilized in this study, the proportion of survey respondents in each demographic category closely matches the U.S. Census information for New Jersey as reported in the 2019 American Communities Survey (US Census, 2020). The data show that:

- Females constituted 52% of the sample and males, 48%. Less than 1% of the sample considered themselves "non-gender conforming."
- Twelve percent of survey respondents were in the youngest 18- to 25-year-old age group, and about 14% of respondents were 26 to 34. Twenty-four percent of respondents were aged 35 to 49 and 49% were aged 50 or older.
- By race/ethnicity, 55% of respondents were White, 13% were African American, 20% Hispanic, 8% Asian and nearly 4% listed another or multiple ethnicities.
- Ninety-one percent of respondents had a high school education or better, including 27% who were high school graduates, 24% who had some college education and 39% who were college graduates or better.

Table 1- 1: Demographic Characteristics of New Jersey Adult Survey Respondents (2018-2020)

Demographics			New Jersey Weighted Sample* % (n=7145)
Gender	Female	(n=3691)	51.7
	Male	(n=3396)	47.5
	Non-gender conforming	(n=57)	0.8
Age	18 to 25	(n=863)	12.2
	26 to 34	(n=1016)	14.3
	35 to 49	(n=1707)	24.1
	50 and older	(n=3492)	48.9
Race Ethnicity	White	(n=3885)	55.3
	Black	(n=895)	12.8
	Hispanic	(n=1424)	20.3
	Asian	(n=547)	7.8
	Other Ethnicity	(n=268)	3.8
Education	Less than high school	(n=654)	9.2
	High school graduate	(n=1940)	27.2
	Some college	(n=1735)	24.3
	College graduate or higher	(n=2811)	39.4
Size of Household	One	(n=1628)	22.8
	Two	(n=3134)	43.9
	Three	(n=1403)	19.6
	Four or more	(n=943)	13.1

- About 23% of residents lived in single person households. Forty-four percent lived in two-person households, 20% in three-person households, and 13% in a household containing four or more people.

CHAPTER 2

ALCOHOL

A. INTRODUCTION

This chapter provides information on the use of alcohol, including current and lifetime prevalence of alcohol use, trends in age of first alcohol use, the frequency and quantity of alcohol consumed, and characteristics of current and heavy drinkers. For the purpose of this report the following definitions are used:

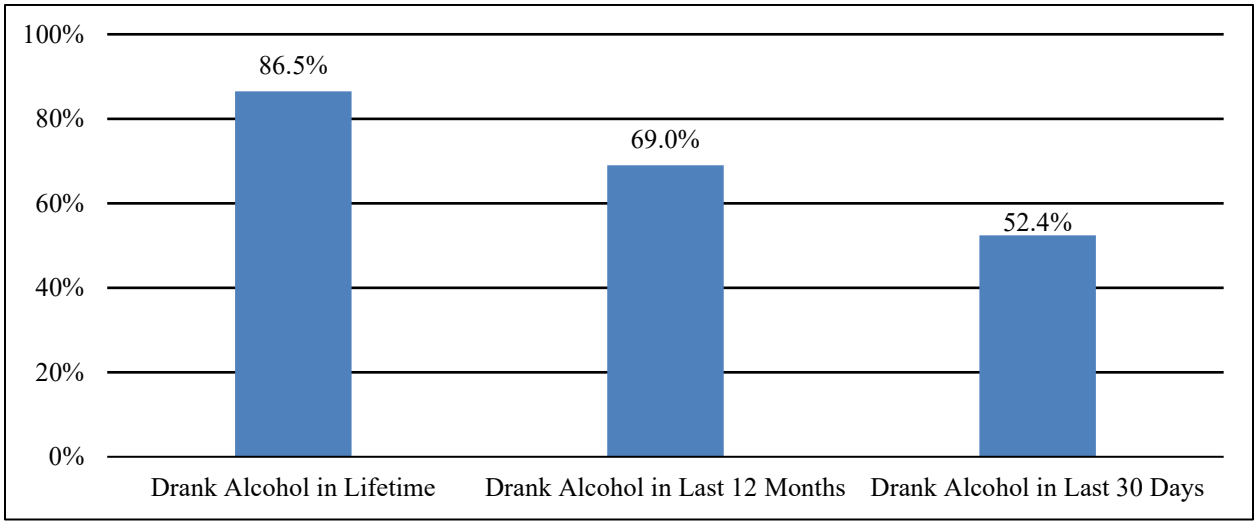
Lifetime Use:	At least one alcoholic drink in lifetime.
Current Use:	At least one drink in the last 30 days.
Heavy Use:	Five or more drinks (males) or four or more drinks (females) on the same occasion on at least 5 days in the past 30 days.
Binge Drinking:	Five or more drinks (males) or four or more drinks (females) on the same occasion on at least one day in the past month.

B. ALCOHOL USE: NEW JERSEY ADULTS

B1. Prevalence and Time Frames (Figure 2-1)

- Most adults (87%) had at least one drink of alcohol in their life, including 69% who consumed alcohol in the past year and 52% who drank in the past 30 days.

Figure 2- 1: Alcohol Consumption: All Adults



B2. Demographic Characteristics: Current Drinkers (Table 2-1)

Gender and Age

- Males were substantially more likely than females to be current drinkers (57% vs. 48%).
- The lowest rate of current drinking was reported by residents aged 18-20 (26%), with rates being substantially higher among residents at or above the legal drinking age of 21. Thus, current drinking was reported by 65% of residents aged 21 to 25, 55% of residents aged 26 to 34, 60% of residents aged 35 to 49, and 49% of those aged 50 and above.

Race/Ethnicity

- White residents had the highest rate of current drinking of all racial/ethnic groups (60%), followed by Asians (46%) Hispanics (46%) and African Americans (39%).

Education

- The highest rate of current drinking was reported by residents who were college graduates or higher (65%), with rates declining steadily as education level decreased. Thus, current drinking was reported by 51% of residents with some college education, 43% of high school graduates, and less than 30% of residents with less than a high school education.

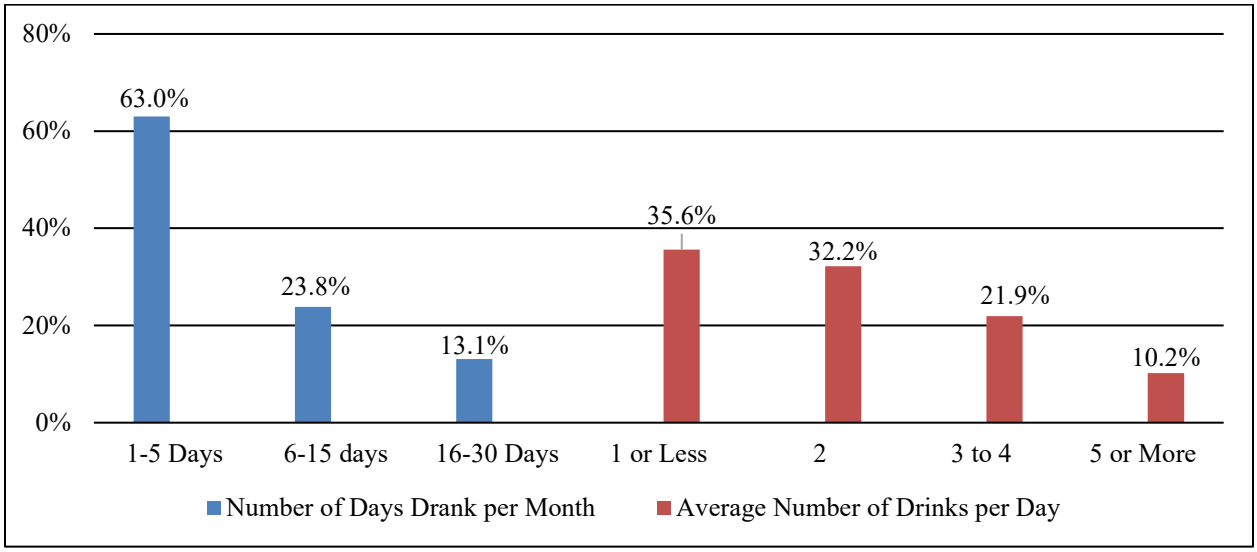
Table 2- 1: Characteristics of Current Drinkers

Demographics		Proportion of Adults Who Drank in Last 30 Days (%)
New Jersey Total Population (n=7145)		**52.7%**
Gender	Males	57.3
	Females	48.1
Age	18-20	25.8
	21-25	64.5
	26-34	55.0
	35-49	60.0
	50+	49.0
Race/ Ethnicity	White	59.8
	Black	39.3
	Hispanic	46.0
	Asian	46.3
Education	Less than H.S.	29.3
	H.S. Grad.	42.7
	Some College	51.2
	College Graduate or higher	65.2

B3. Frequency and Quantity of Alcohol Use: Current Drinkers (Figure 2-2)

- Among adults who drank alcohol in the last 30 days, 63% drank on five days or less, 24% drank on 6 to 15 days and 13% drank on 16 to 30 days out of the month.
- On the days they drank, about 36% of adults reported having only one drink or less, 32% reported having two drinks, 22% three to four drinks and 10%, five drinks or more.

Figure 2- 2: Frequency and Quantity of Alcohol Use in Last 30 Days: Current Drinkers

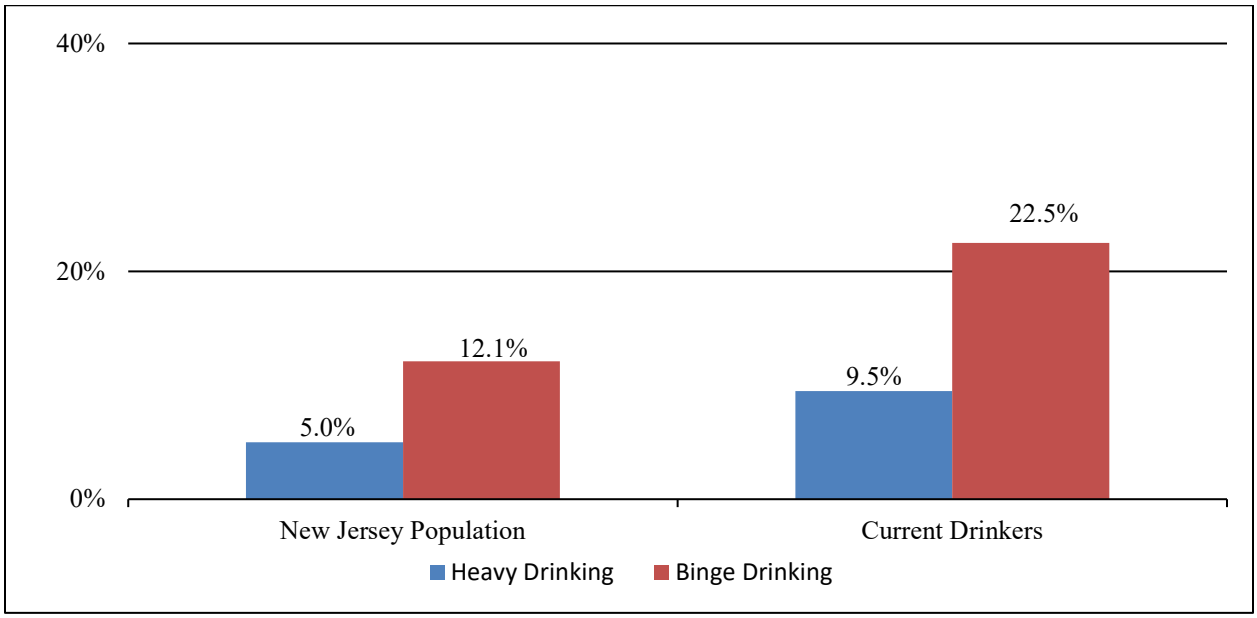


C. PROBLEM DRINKERS: HEAVY AND BINGE DRINKING

C1. Prevalence of Heavy and Binge Drinking (Figure 2-3)

- Approximately 5% of all adults and 10% of current drinkers reported drinking heavily in the last 30 days.
- Binge drinking was reported by 12% of all adults and 23% of current drinkers.

Figure 2- 3: Prevalence of Heavy and Binge Drinking in the Past 30 Days: All Adults and Current Drinkers



C2. Demographic Characteristics of Heavy and Binge Drinkers (Table 2-2)

Gender, Age, Race/Ethnicity and Education

- Among all adults, men were more likely than women to have engaged in heavy drinking (7% vs. 3%) and binge drinking (16% vs. 9%) in the last 30 days.
- By age, residents under age 50 were more likely to drink heavily and binge drink than adults aged 50 or older. Heavy drinking was reported by 6%-8% of residents between the ages of 18 and 49 and only 3% of residents aged 50 or older. Similarly, binge drinking was reported by 14%-19% of those under the age of 50 and 8% of residents over age 50.
- By race/ethnicity, rates of heavy drinking were highest among Hispanics (6%) and Whites (5%) and lowest among African Americans (3%) and Asians (2%). Similarly, Whites and Hispanics had the highest rate of binge drinking (13% each) and African Americans and Hispanics, the lowest (8% and 9%, respectively).

Table 2- 2: Prevalence of Heavy and Binge Drinking in the Last 30 Days by Gender, Age, Race/Ethnicity, and Education: All Adults

		Heavy Drinking (%)	Binge Drinking (%)
New Jersey Total Population		***5.0***	***12.1***
Gender	Males	7.2	15.5
	Females	2.9	8.9
Age	18-25	8.1	18.1
	26-34	5.7	18.5
	35-49	6.7	14.2
	50+	3.4	7.9
Race/Ethnicity	White	5.2	13.0
	Black	2.7	8.4
	Hispanic	5.6	13.0
	Asian	2.4	9.3
Education	Less than high school	2.7	7.8
	High school graduate	5.3	10.4
	Some college	6.5	13.8
	College graduate or higher	4.6	13.2

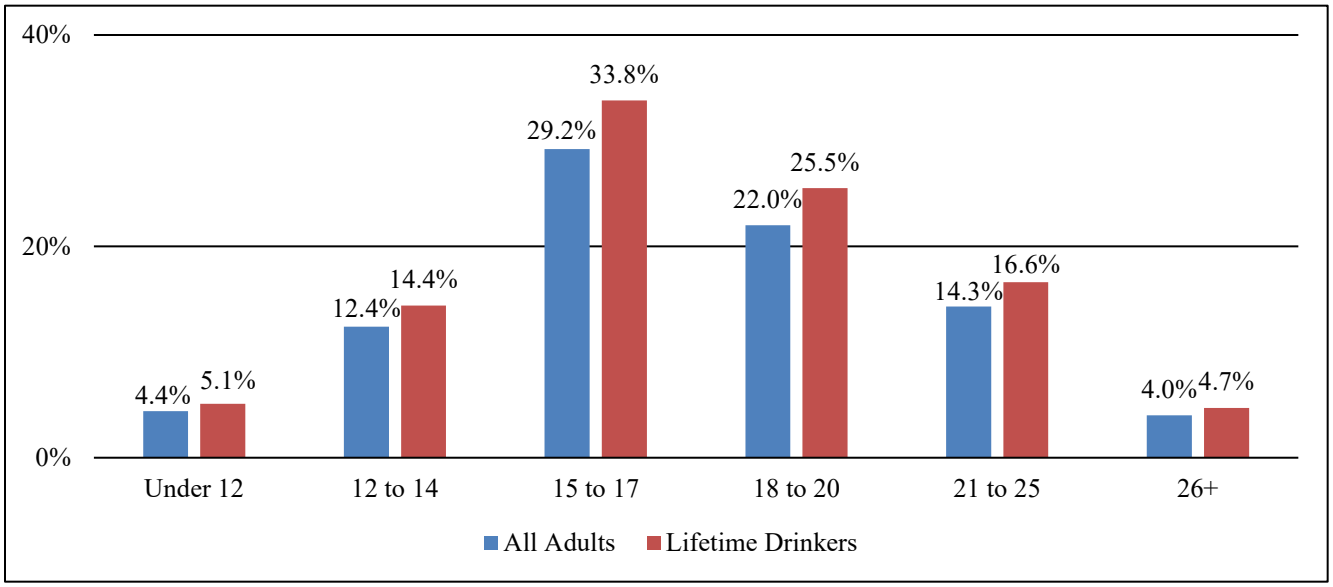
- By educational status, adults with less than a high school education had the lowest rates of heavy (3%) and binge drinking (8%) and those with some college education, the highest (7% and 14%, respectively). Heavy and binge drinking rates were slightly lower among college graduates (5% and 13%, respectively).

D. AGE OF FIRST ALCOHOL USE

D1. All Adults and Lifetime Drinkers (Figure 2-4)

- Among all adults, about 17% reported initiating the use of alcohol before age 15 and 29%, between ages 15 and 17. Only 18% of all adults had their first drink of alcohol after age 20.

Figure 2- 4: Age of First Alcohol Use: All Adults and Lifetime Drinkers



- A similar pattern of initiation was found among lifetime drinkers, with more than half (53%) reporting their first drink before the age of 18 and nearly 20%, before age 15. About 26% had their first drink between ages 18 and 20. Only 21% of drinkers first drank alcohol on or after age 21.

D2. Demographic Characteristics of Early Alcohol Users (Figure 2-5)

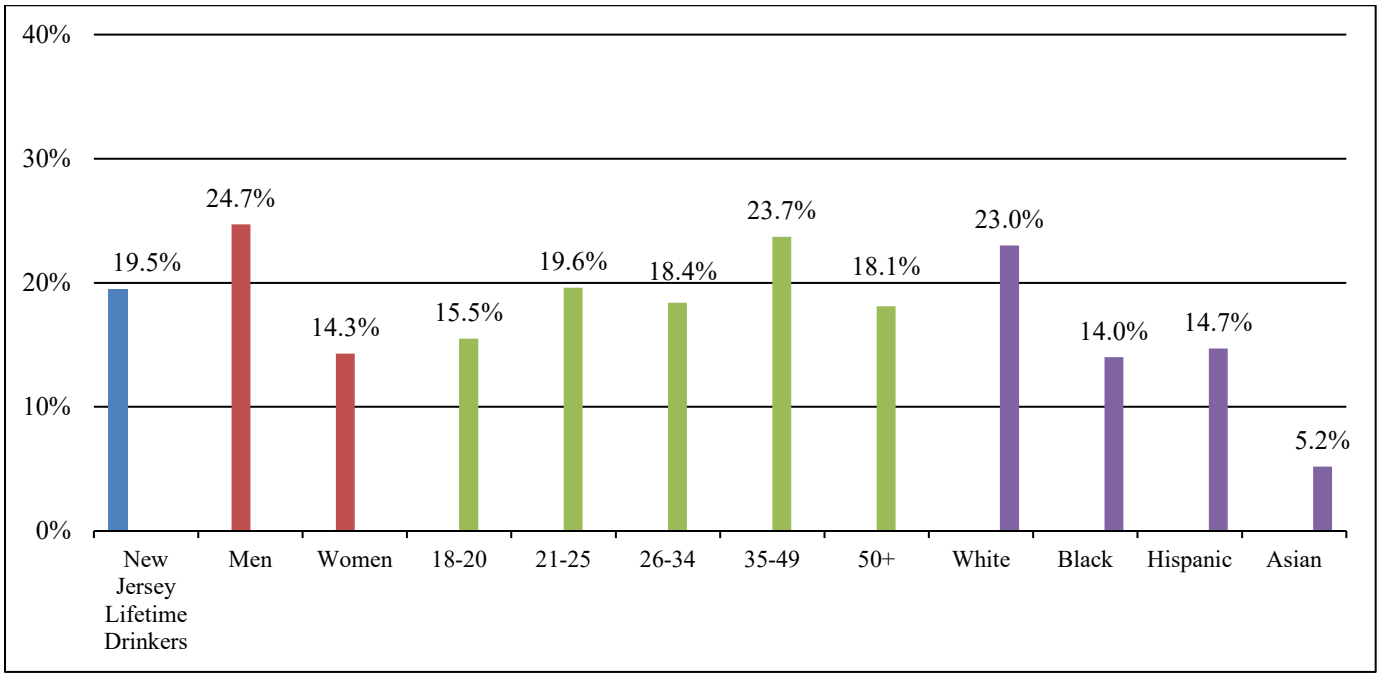
Gender, Age and Race/Ethnicity

- Among all adults who ever drank in their lifetimes, men were nearly twice as likely as women to be early drinkers, with 25% of men vs. 14% of women having their first alcoholic drink before age 15.

- The youngest cohort of drinkers aged 18-20 was somewhat less likely than older drinkers to report initiating alcohol use before age 15. Thus, 16% of 18–20-year-olds reported early drinking compared to 20% of 21- to 25-year-olds, 24% of those aged 35-49 and 18% of both 26–34-year-olds and those aged 50 and older.

- Early drinking was more prevalent among White residents (23%) than among African Americans (14%), Hispanics (15%) and Asians (5%).

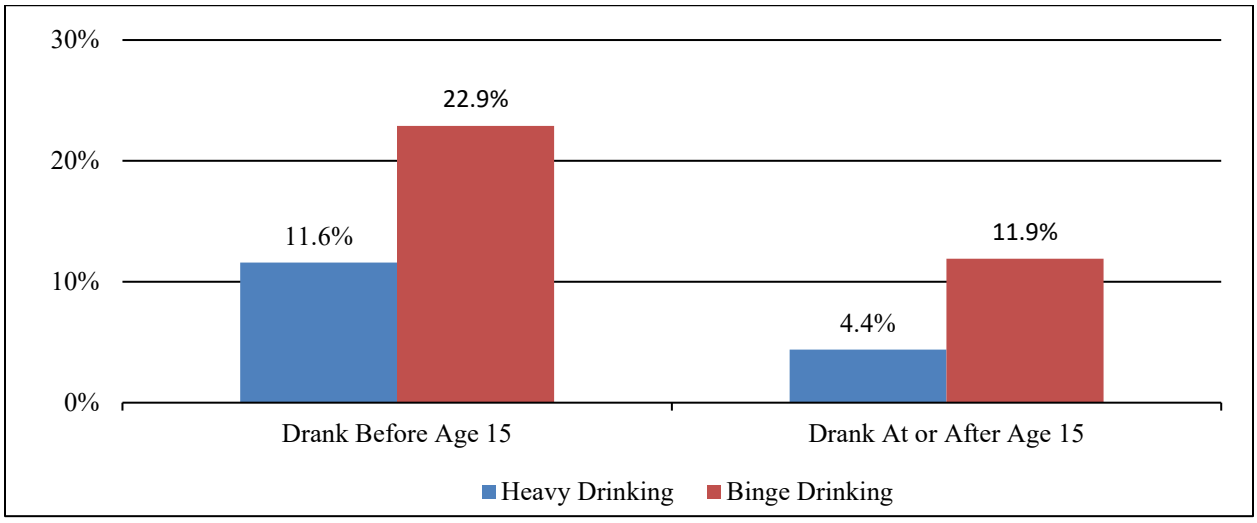
Figure 2- 5: Prevalence of Early Alcohol Use (Before Age 15) by Gender, Age and Race/Ethnicity: Lifetime Drinkers



D3. Relationship between early alcohol use (before age 15) and alcohol misuse (Figure 2-6)

- Heavy alcohol use and binge drinking were highly associated with the early initiation of alcohol use.
- Among those who first drank before age 15, 12% used alcohol heavily and 23% reported binge drinking. In contrast, among those who first drank on or after age 15, only 4% engaged in heavy drinking and 12% in binge drinking.

Figure 2- 6: Past 30-Day Heavy and Binge Drinking by Age of First Alcohol Use: Lifetime Drinkers



CHAPTER 3

ILLICIT DRUG USE

A. INTRODUCTION

This chapter presents an overview of the prevalence of illicit drug use and the characteristics of illicit drug users. The drugs examined in this survey are consistent with those assessed in the NSDUH (Center for Behavioral Health Statistics and Quality, 2017), although the New Jersey survey did not include as detailed an assessment of individual drug types. The survey measured use of the following drugs: marijuana, cocaine, heroin, methamphetamine, hallucinogens, such as PCP or LSD, club drugs, such as ecstasy, and the misuse of prescription drugs, including pain relievers or other opiates, tranquilizers, sedatives and stimulants. Over-the-counter medications and the legitimate, prescribed use of any of these substances were not included. This survey also excluded inhalants, given their low prevalence of use in prior surveys.

While marijuana has been legalized in New Jersey for medical use and, more recently, for recreational use, we classified marijuana as an illicit substance in this survey to maintain consistency with the NSDUH. Further, legalized recreational use had not been implemented statewide at the time of the survey and medical use, while legal, was minimal, with only 1.5% of all adults in the 2018 survey (the only survey in the 3-year cycle to measure medical use) had been prescribed medicinal cannabis by a New Jersey doctor.

For certain analyses, prescription-type drugs are grouped together as "psychotherapeutics," which follows the same classification scheme used in the NSDUH. The psychotherapeutics drug category includes all prescription-type drugs used in ways not prescribed by a doctor and includes stimulants, opiate pain relievers, sedatives or sleeping pills, and tranquilizers. While prescription stimulants may contain amphetamine-type substances, we include methamphetamine in a separate drug category to reflect its use in non-prescription form.

Because few residents acknowledged using any illicit drugs in the last 30 days, the analyses primarily focus on those who reported using illicit drugs in their lifetime and/or in the last 12 months. The following definitions are used in this chapter:

Current Use: One or more illicit drugs in the last 30 days

Recent Use: One or more illicit drugs in the last 12 months

Lifetime Use: One or more illicit drugs in lifetime

Multiple Use: Two or more types of illicit drugs in lifetime

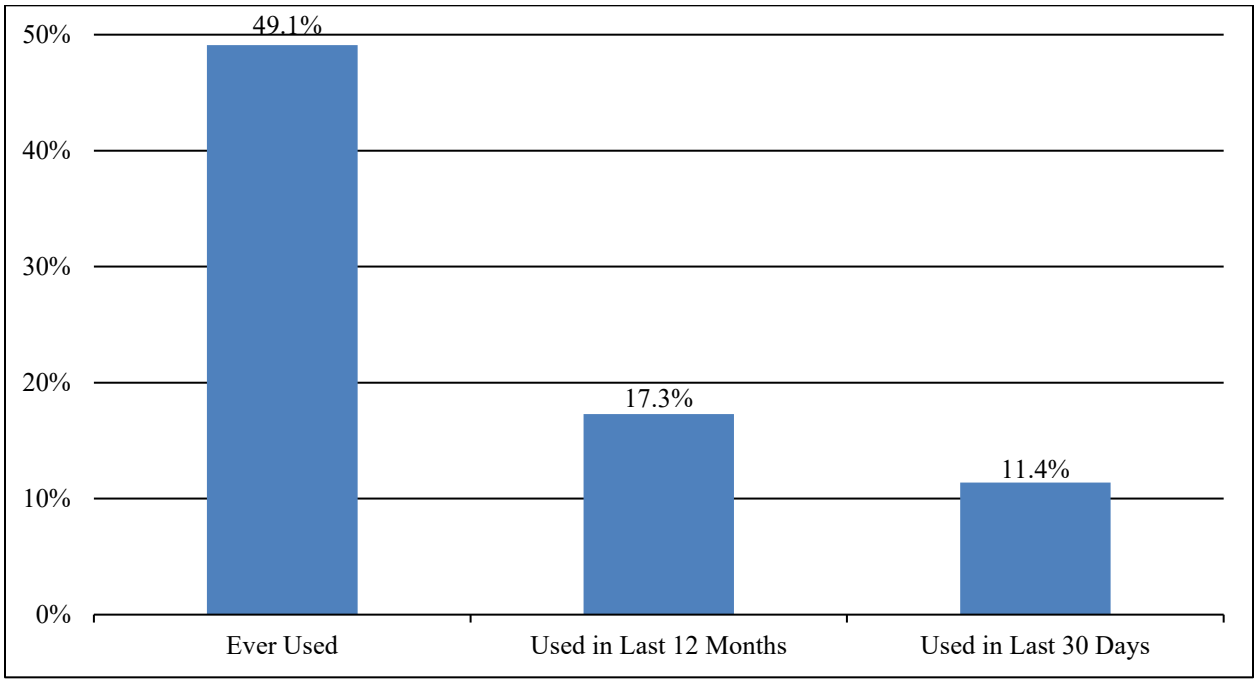
Single Use: One type of drug in lifetime

B. PREVALENCE OF ILLICIT DRUG USE

B1. Timeframes of Use (Figure 3-1)

- In terms of population percentages, 49% of adults reported using one or more illicit drugs in their lifetime (lifetime users), 17% used illicit drugs in the last 12 months (recent users) and 11%, in the last 30 days (current user).

Figure 3- 1: Use of Illicit Drugs (including Marijuana): All Adults



B2. Estimates of Use in the New Jersey Population, by Timeframes (Table 3-1)

- Based on the size of the New Jersey adult population according to estimates from 2019 U.S. Census Bureau data (U.S. Census Bureau, 2020), (Table 3-1), these percentages translate into 3,409,313 New Jersey residents who used one or more illicit drugs at some time in their lives, 1,201,244 who used one or more illicit drugs in the last 12 months, and 791,571, who used one or more illicit drugs in the last 30 days.

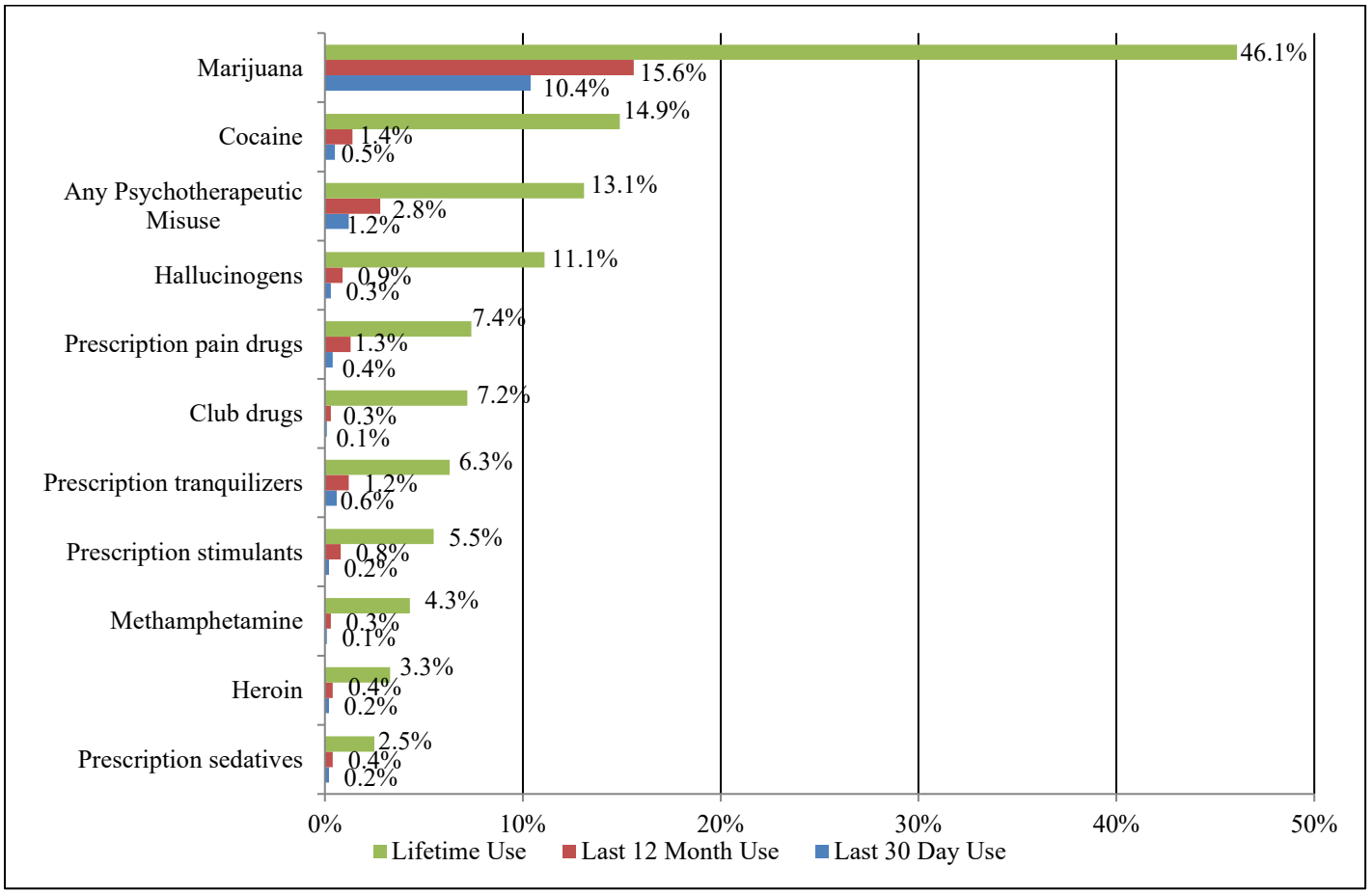
Table 3- 1: Resident Adult Population Estimates for Illicit Drug Use

TOTAL NEW JERSEY RESIDENT ADULTS, 2019	**n** = 6,943,612
RESIDENTS REPORTING EVER (LIFETIME) ILLICIT DRUG USE	**n** = 3,409,313
RESIDENTS REPORTING PAST YEAR ILLICIT DRUG USE	**n** = 1,201,244
RESIDENTS REPORTING PAST 30 DAY ILLICIT DRUG USE	**n** = 791,571

B3. Use of Specific Drug Types (Figure 3-2)

- By far, marijuana was the most frequently reported drug of abuse by adults with respect to lifetime, past 12-month and past 30-day use. Lifetime use was reported by 46% of all adults, past 12-month use by 16% and past 30-day use, by 10%.
- Cocaine was the second most frequently reported lifetime drug of abuse, reported by 15% of adults. Only 1% reported using cocaine in the last 12 months, however, and less than 1% in the last 30 days.
- Third with respect to lifetime prevalence was the psychotherapeutic drug category, with 13% of all residents reporting misuse of one or more psychotherapeutics in their lifetimes, 3% in the last 12 months and 1% in the last 30 days.
- Hallucinogens were fourth in terms of lifetime prevalence, reported by 11% of adults. About 1% used hallucinogens in the last 12 months and less than 1%, in the last 30 days.

Figure 3- 2: Use of Marijuana and Illicit Drugs, by Drug Type and Time Frame of Use: All Adults



- Prescription pain medication used in ways not prescribed was fifth among all drugs in prevalence of lifetime use, reported by 7% of all adults. Prescription pain medication was misused by 1% of all adults in the past year and by less than 1% in the last 30 days.

- Club drugs were sixth in prevalence of lifetime use, with 7% reporting use in lifetime and less than 1% reporting use in the last 12 months or 30 days.

- Prescription tranquilizers and prescription stimulants ranked seventh and eighth in terms of frequency of lifetime misuse, reported by 6% for each type of drug. Only 1% or fewer reported misusing either drug in the past 12-month or 30-days.

- The remaining three drugs of abuse, methamphetamines, heroin and prescription sedatives, were reported by 4% or fewer of adults with respect to lifetime use and by less than 1% in terms of past 12-month or past 30-day use.

C. DEMOGRAPHIC CHARACTERISTICS OF RECENT USERS OF MARIJUANA AND ILLICIT DRUGS OTHER THAN MARIJUANA: NEW JERSEY ADULTS

C1. Gender, Race/Ethnicity and Education (Table 3-2)

- Men were more likely than women to have used marijuana (18% vs. 14%), and other illicit drugs (6% vs. 3%) in the last 12 months.

- By race/ethnicity, rates of marijuana use in the last 12 months were generally comparable for Whites (16%), African Americans (15%), Hispanics (15%) and Asians (13%). Illicit drugs were used by 5% of Whites, 4% of Hispanics and 3% of African Americans and Asians.

- Rates of marijuana and other illicit drug use did not vary remarkably by education status. Those at the lowest education level tended to have the lowest rates of marijuana (12%) and other illicit drug use (3%), and those with some college education, the highest (19% and 5%, respectively). Among high school graduates, 15% used marijuana and 4% used other illicit drugs, and among college graduates, 14% used marijuana and 5%, other illicit drugs.

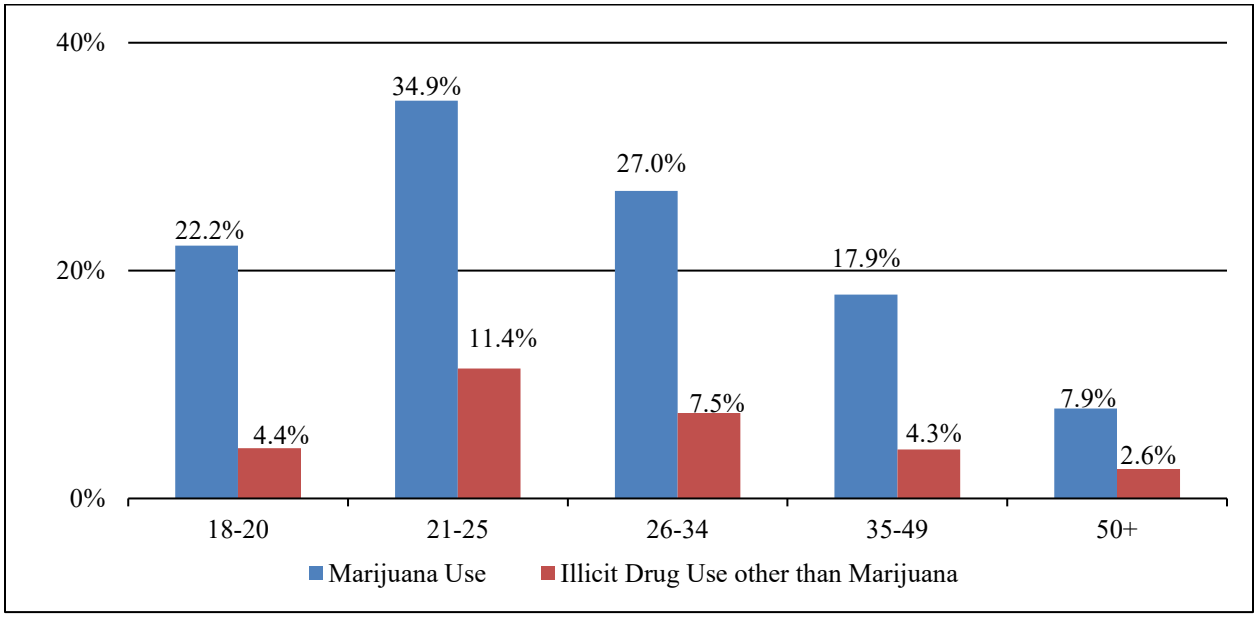
Table 3- 2: Marijuana Use and Illicit Drug Use other than Marijuana in the Last 12 Months by Sex, Race/Ethnicity and Education: All Adults

		Marijuana Use (%)	Illicit Drug Use Other Than Marijuana (%)
New Jersey Total Population		***15.6***	***4.4***
Gender	Males	17.6	5.7
	Females	13.8	3.1
Race/Ethnicity	White	16.2	5.1
	Black	14.9	3.2
	Hispanic	14.7	4.0
	Asian	12.8	2.9
Education	Less than high school	12.2	2.8
	High school graduate	15.1	4.0
	Some college	19.4	4.9
	College graduate or higher	14.4	4.7

C2. Age (Figure 3-3)

- Somewhat greater variation in rates of marijuana and other illicit drug use was found by age. Thus, residents aged 21-25 reported the highest prevalence of past-year marijuana (35%) and other illicit drug use (11%) and those aged 50+, the lowest prevalence of use of marijuana (8%) and other illicit drugs (3%).

Figure 3- 3: Marijuana Use and Illicit Drug Use Other Than Marijuana in the Last 12 Months by Age: All Adults



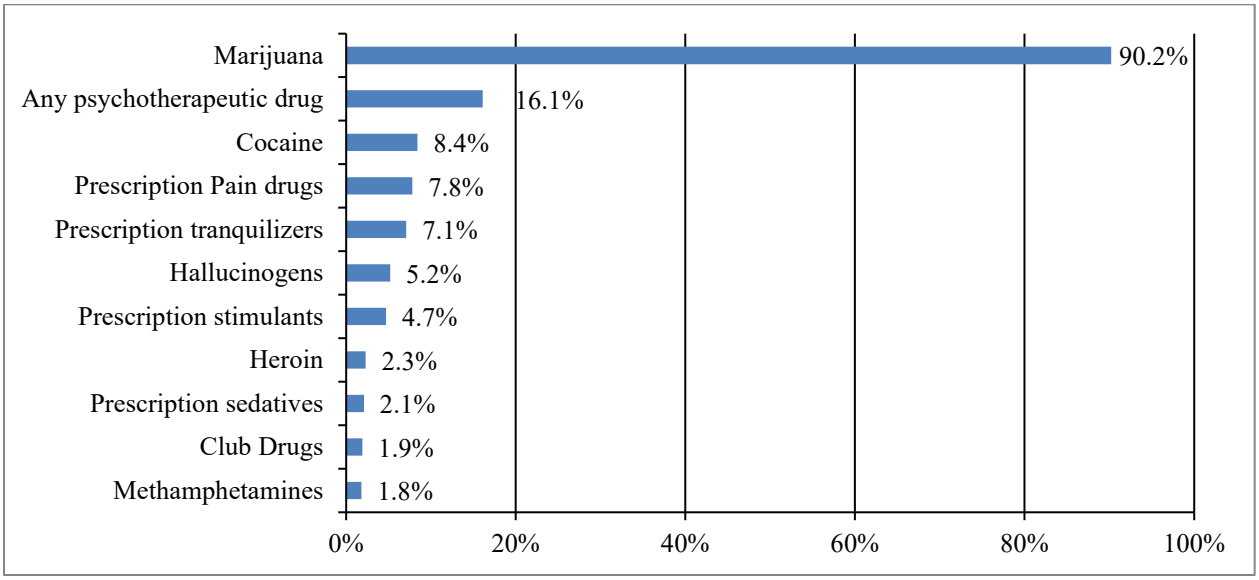
- Residents aged 26-34 were second highest in prevalence of use for both marijuana (27%) and illicit drugs other than marijuana (8%) in the last year.
- Residents aged 18-20 and 35-49 had similar rates of past-year drug use, with respect to both marijuana (22% and 18%, respectively) and other illicit drugs (4% for each group).

D. PATTERNS OF DRUG USE AMONG RECENT DRUG USERS,

D1. Prevalence of Use by Drug Type (Figure 3-4)

- Among those using drugs in the last 12 months, marijuana was the most frequently reported drug, used by 90% of recent illicit drug users.

Figure 3- 4: Drugs Used in Last 12 Months by Category of Drug: Recent Drug Users

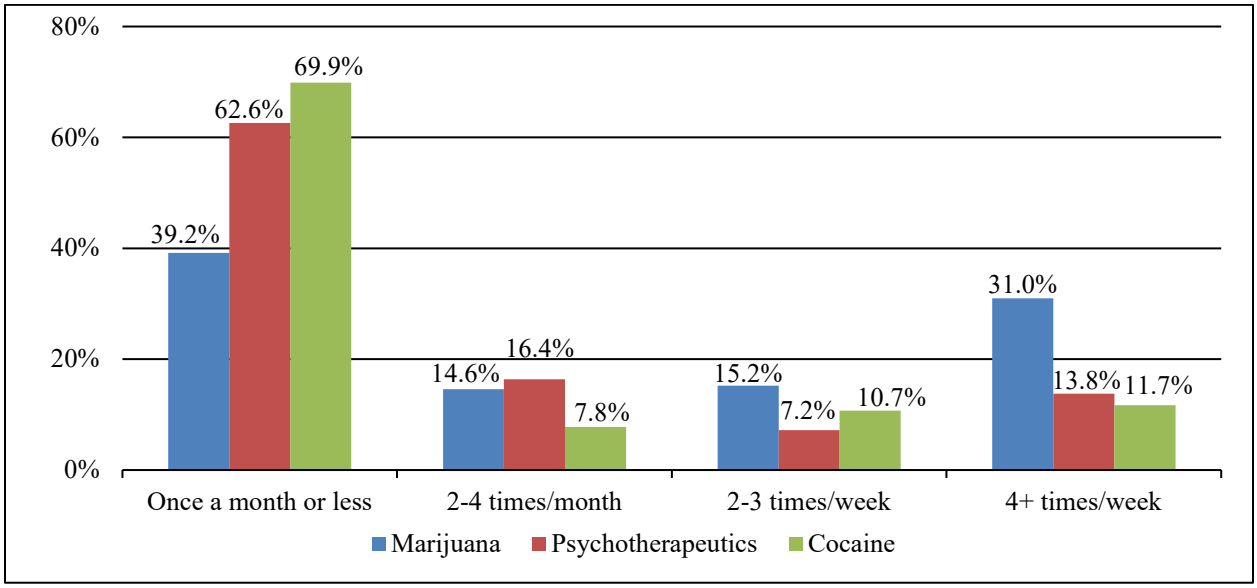


- The psychotherapeutic drug category was next in reported use, used by 16% of recent users.
- Cocaine and prescription pain medication were third and fourth, respectively, in reported use, reported by 8% of recent users.
- Next in reported use were prescription tranquilizers (7%).
- Use of hallucinogens, prescription stimulants, heroin, prescription sedatives, club drugs and methamphetamines were reported by 5% or fewer of recent drug users.

D2. Frequency of Use of the Three Most Prevalent Drug Types (Figure 3-5)

- Recent drug users reported different patterns of use with respect to the three most commonly used drug types, with marijuana users reporting more frequent use overall than users of either psychotherapeutic drugs or cocaine.
- About 31% of marijuana users reported using 4 times a week or more, compared to 14% of psychotherapeutic users and 12% of cocaine users.
- Only 39% of marijuana users reported using once a month or less, compared to 63% of psychotherapeutic drug users and 70% of cocaine users.

Figure 3- 5: Frequency of Drug Use in the Last 12 Months[1]: Recent Drug Users



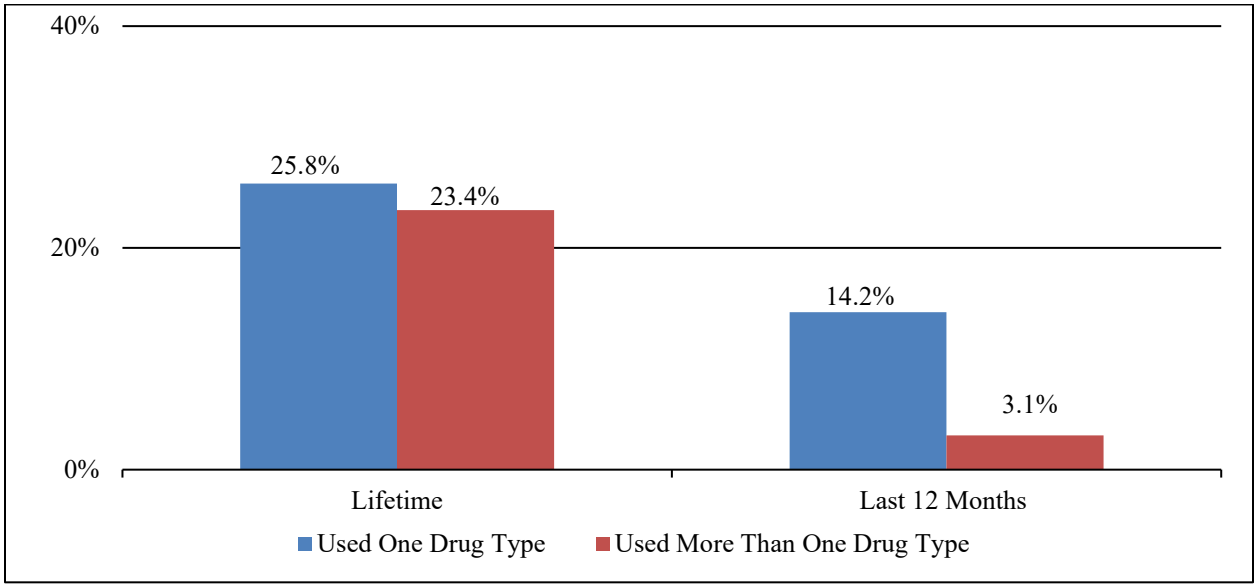
[1] For users of multiple psychotherapeutic drugs, frequency is reported for the psychotherapeutic drug having the highest frequency of use.

E. USE OF MULTIPLE DRUG TYPES

E1. Overall Prevalence of Multiple Drug Type Use (Figure 3-6)

- Twenty-three percent of adults reported multiple drug use (i.e., using more than one type of drug) in their lifetimes and a slightly higher proportion (26%) reported lifetime use of only one drug type. In the past 12 months, however, substantially more adults reported having used one drug type (14%) than multiple types of drugs (3%).

Figure 3- 6: Multiple Drug Use in Lifetime and in Last 12 Months: All Adults

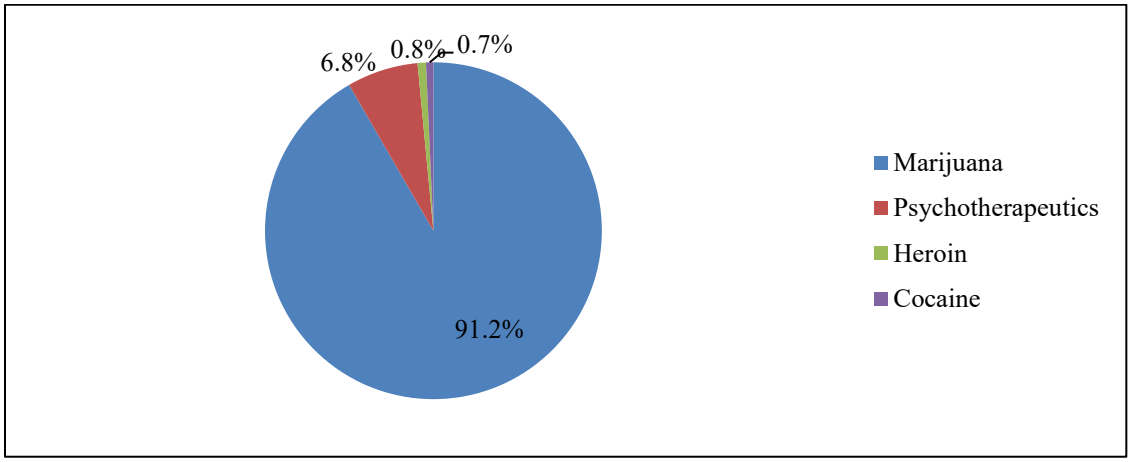


E2. Types of Drugs Used

Single Drug Users (Figure 3-7)

- Among users of a single drug type in the past 12 months, marijuana was the most frequently reported drug (91%). Psychotherapeutic drugs, although second in prevalence to marijuana, were reported by only 7% of single drug type users.
- Less than 1% of single drug users reported use of heroin or cocaine in the last 12 months. Other drugs, such as hallucinogens, club drugs and methamphetamine, were similarly used by fewer than 1% of single users in the last 12 months (not shown).

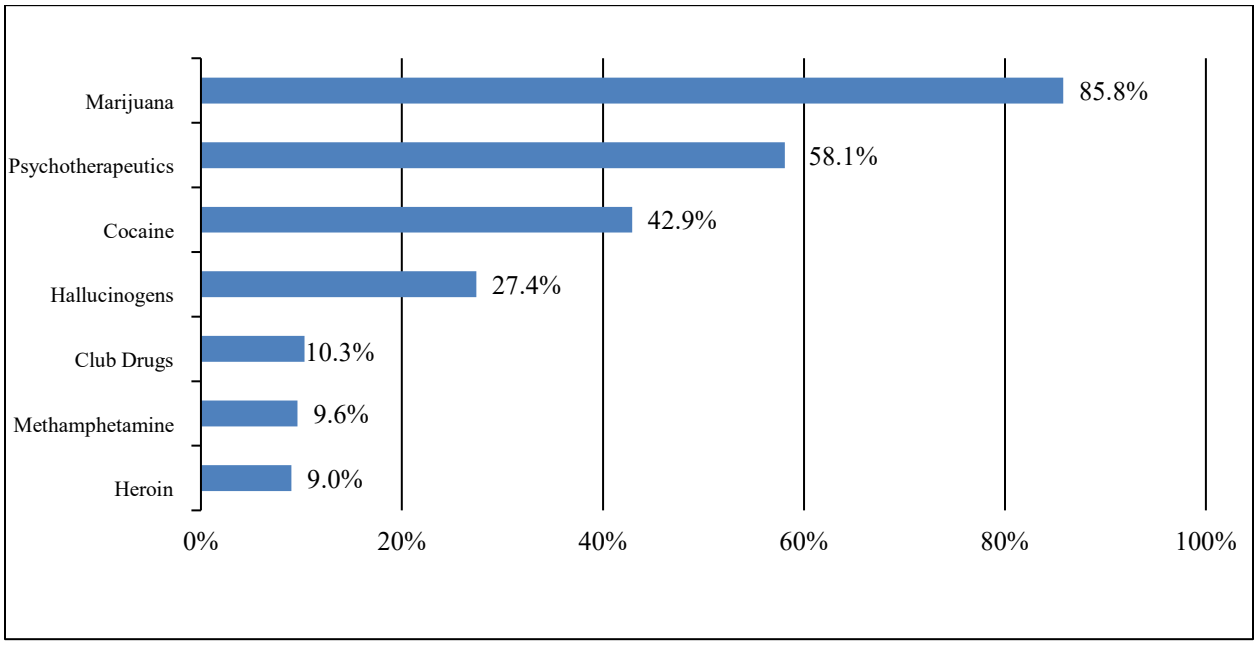
Figure 3- 7: Drug Types Used by Single Drug Users in Last 12 Months



Multiple Drug Users (Figure 3-8)

- Among users of multiple drug types in the last 12 months, marijuana and psychotherapeutic drugs were the most frequently reported drugs, used by 86% and 58% of multiple users, respectively.
- Cocaine was the third most commonly reported drug by multiple users, with 43% of respondents reporting use in the last 12 months.
- The remaining drugs were used at less than half the frequency of marijuana and psychotherapeutics, with 27% of multiple drug type users reporting hallucinogen use, and 10% reporting the use of club drugs and methamphetamine. Approximately 9% used heroin in the last 12 months.

Figure 3- 8: Drugs Used by Users of Multiple Drug Types in Last 12 Months

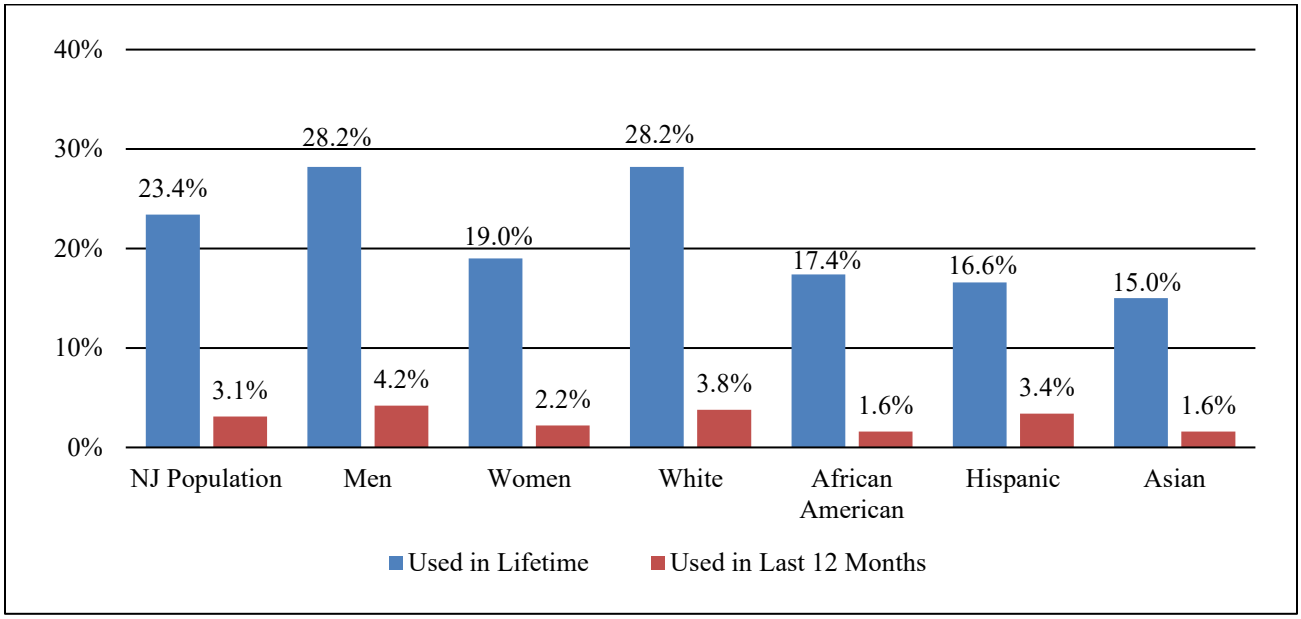


E3. Characteristics of Multiple Drug Users

Gender and Race/Ethnicity (Figure 3-9)

- Men were substantially more likely than women to have used multiple drug types in their lifetimes (28% vs. 19%). However, only 2%-4% of men and women reported use of multiple drug types in the past year.

Figure 3- 9: Use of Multiple Drug Type by Gender and Race/Ethnicity: All Adults

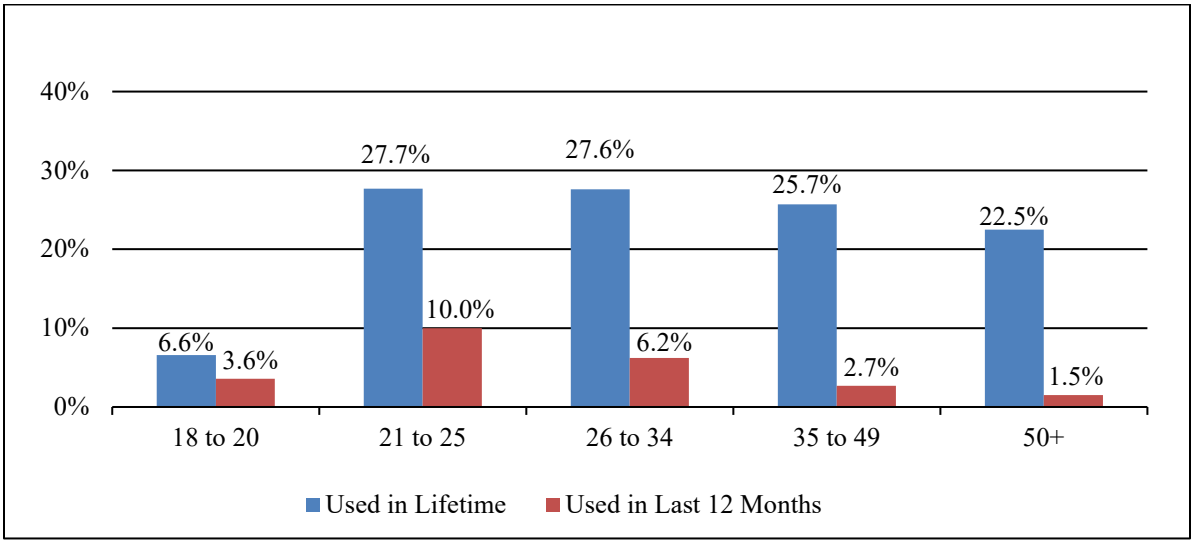


- With respect to race/ethnicity, the highest prevalence of the lifetime use of multiple drug types was found among White adults, with 28% using multiple drugs in their lifetime compared to 15%-17% of Asians, Hispanics, and African Americans. There were few racial/ethnic differences in past-year use of multiple drug types, however, which was reported by 2%-4% of all racial/ethnic groups.

Age (Figure 3-10)

- By age, those aged 18-20 reported the lowest lifetime use of multiple drug types, with only 7% in the youngest age group reporting lifetime use compared to 23% to 28% of those in the older age groups.
- With respect to recent past-year use, however, those aged 50+ had the lowest prevalence (2%) and those aged 21-25, the highest (10%).
- Past year use of multiple drugs ranged from 4%-6% in the other age groups.

Figure 3- 10: Use of Multiple Drug Types by Age: All Adults



F. AGE OF FIRST DRUG USE: LIFETIME DRUG USERS

This section reports the age of first use by lifetime users of the three most frequently used categories of drugs: marijuana, psychotherapeutics and cocaine.

F1. Age of Initiation by Type of Drug (Figure 3-11)

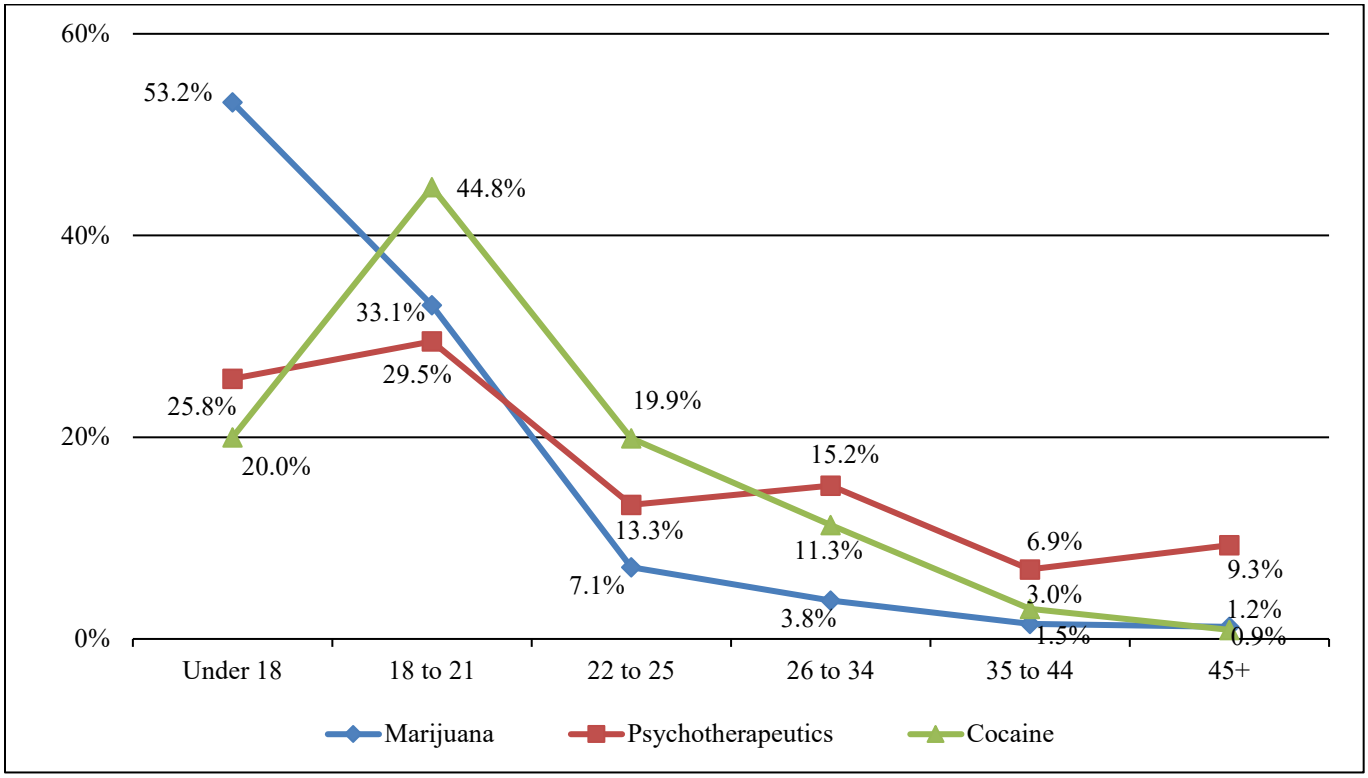
- Marijuana use was initiated earlier in life than either cocaine or psychotherapeutics, with about 53% of lifetime marijuana users initiating use before age 18. In contrast, 26% of psychotherapeutic users and 20% of cocaine users initiated use before age 18.

- First use of cocaine and psychotherapeutics peaked at ages 18-21, with 45% of cocaine users and 30% of psychotherapeutic users first using these drugs at this age.

- First use of both marijuana and cocaine declined steadily with age, with only 3% or fewer initiating use at ages 35-44 and 1% or fewer initiating use of these substances at age 45 or older.

- While first psychotherapeutic drug use generally declined overall with age, 7% of users initiated use at ages 35-44 and over 9% initiated misuse after age 45.

Figure 3- 11: Age of First Use of Selected Drugs[1]: Lifetime Drug Users

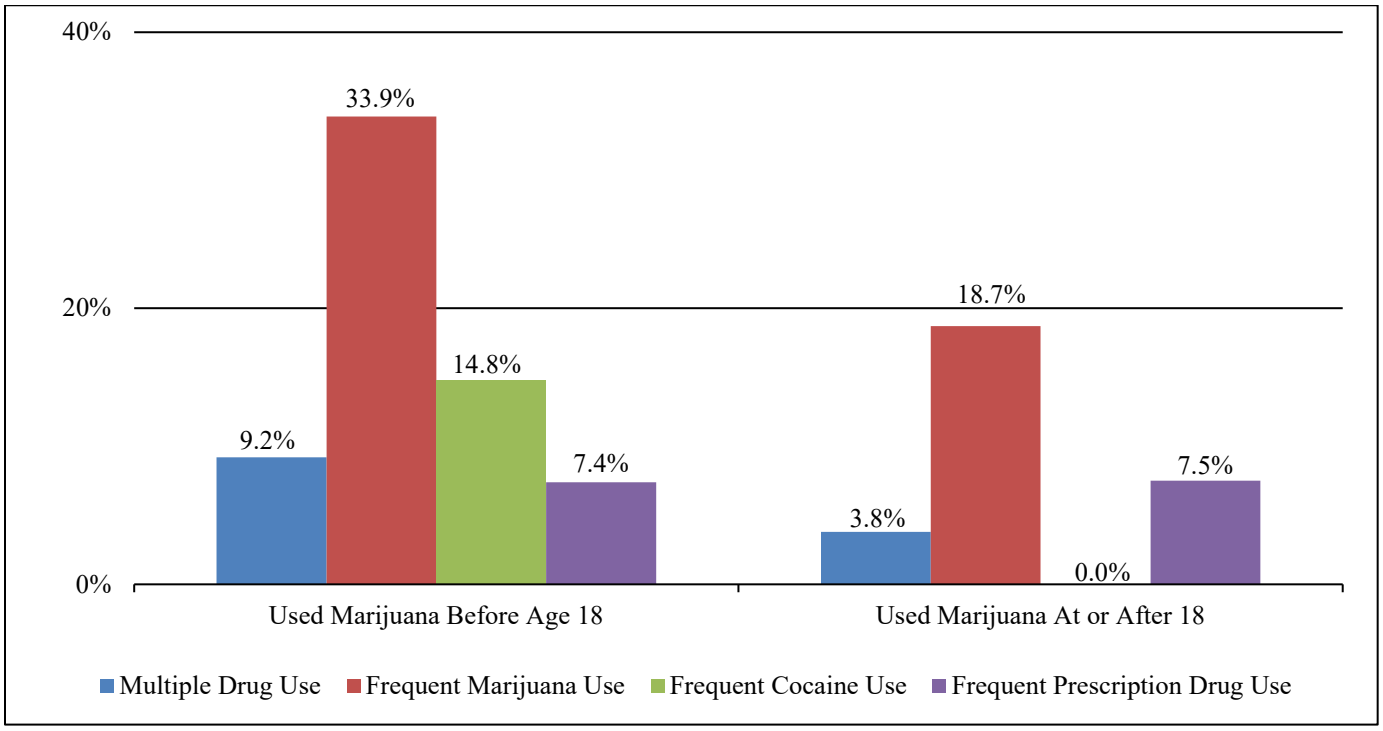


[1] For users of multiple psychotherapeutic drugs, age of first use represents the earliest age at which the respondent used any psychotherapeutic drug.

F2. Relationship Between Early Marijuana Use and Problem Drug Use (Figure 3-12)

- Initiation of marijuana use before age 18 was found to be associated with several measures of recent problem drug use.
- Early marijuana users were more likely than those initiating use after age 18 to have used multiple drugs in the last 12 months (9% vs. 4%).
- Early marijuana users were also more likely to have used drugs more frequently (4x week or more) in the last 12 months than those who first used marijuana after age 18, including marijuana (34% vs. 19%) and cocaine (15% vs. 0%).
- However, early marijuana use was not associated with more frequent misuse of prescription drugs, with about 7% of both early and late marijuana users using prescription drugs 4 times a week or more.

Figure 3- 12: Problem Drug Use by Age of First Marijuana Use: All Lifetime Illicit Drug Users



- NOTE: Frequent use of marijuana, cocaine and prescription drugs is defined as use 4 times a week or more

CHAPTER 4

SUBSTANCE ABUSE, DEPENDENCE AND TREATMENT ACCESS

A. INTRODUCTION

This chapter presents information on the prevalence of alcohol and drug abuse/dependence in the New Jersey population. We explore the extent to which users and heavy users of alcohol, marijuana, and other illicit drugs meet criteria for substance abuse or dependence. This chapter also examines the association between early use (before age 18) of alcohol and marijuana and the subsequent development of substance abuse or dependence as well as risk behaviors associated with the use of various substances. Additionally, this chapter describes patterns of addiction treatment utilization for the population as a whole and for demographic subgroups, including levels of treatment need, demand and access among those needing treatment.

Dependence on alcohol and drugs was assessed using questions based on criteria specified in the Diagnostic and Statistical Manual of Mental Disorders, 4th edition (DSM-IV) (American Psychiatric Association, 1994). Dependence questions measure such behaviors as continued use in the face of medical and mental health problems, tolerance, withdrawal, and attempts to cut down or refrain from use. Questions pertaining to abuse relate to problems experienced in the workplace, at home or school, conflicts with family or other social relationships, and legal difficulties relating to substance use. Thus, questions pertaining to dependence reflect a higher level of problem severity than those pertaining to abuse. Persons were classified as only abusing a substance if they met the aforementioned standards of abuse but did not also meet the criteria for dependence. Classification of drug abuse or dependence was made if the person met the criteria for either abuse or dependence with respect to alcohol and/or at least one drug.

The following definitions are used in this chapter:

Formal Treatment: All interventions other than self-help groups (e.g., Alcoholics Anonymous or Narcotics Anonymous), including hospital inpatient, detoxification, residential and outpatient rehabilitation programs. Formal treatment can be provided by substance abuse treatment agencies, mental health clinics, private therapists, prison treatment programs, and private MD's.

Treatment Need: Respondents were considered to have treatment need if they: a. met the criteria for abuse of, or dependence on, alcohol or drugs in the last 12 months; OR b. received formal treatment for a substance abuse problem in the last 12 months but did not meet survey criteria for abuse/dependence.

Treatment Demand: Respondents were considered to "demand" or want treatment if they: a. wanted treatment in the last 12 months but did not receive it; OR b. received treatment in the past 12 months but wanted more than they received; OR c. received all the treatment they wanted.

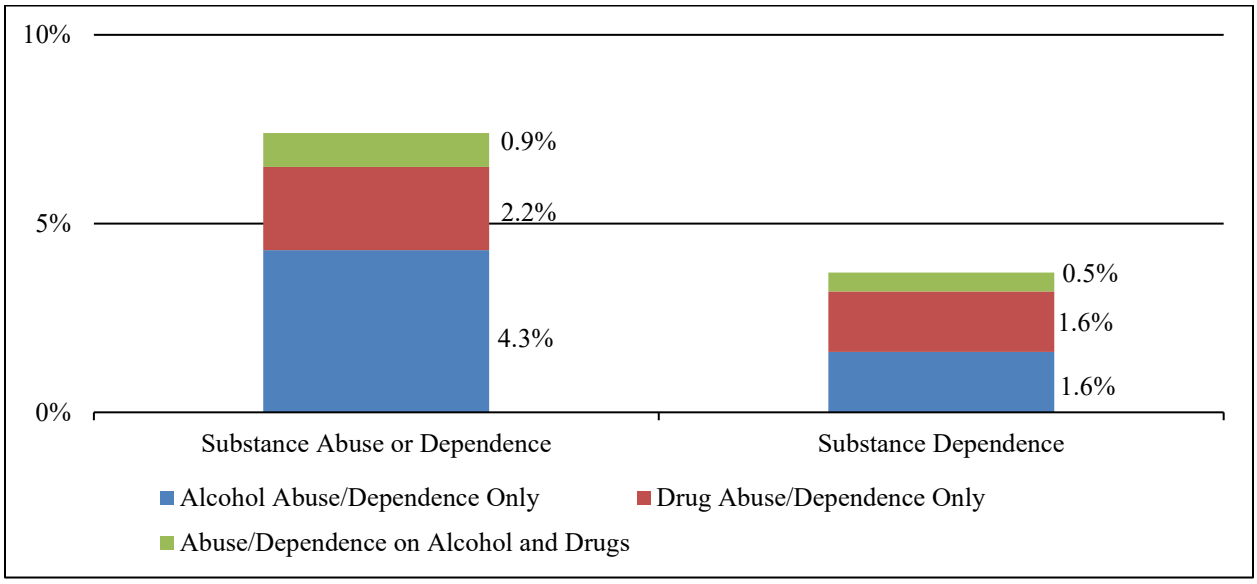
Unmet Demand: Respondents were considered to have unmet demand if they: a. wanted treatment in the last 12 months but did not receive it; OR b. received treatment in the past 12 months but wanted more than they received.

B. PREVALENCE OF SUBSTANCE ABUSE AND DEPENDENCE

B1. General Population Percentages (Figure 4-1)

- In the last 12 months, 7.4% of all adults met screening criteria for substance abuse or dependence, with 3.7% meeting criteria for substance dependence.
- Among those who met the criteria for substance abuse or dependence, about 4% had problems with alcohol alone, 2% with drugs alone, and less than 1% with both.
- Among those who met the criteria for substance dependence, nearly 2% were dependent on alcohol alone, almost 2% were dependent on drugs alone, and less than 1% were dependent on both.

Figure 4- 1: Substance Abuse and Dependence in the Last 12 Months: All Adults



B2. Estimated Size of New Jersey Population with Substance Abuse or Dependence (Table 4-1)

- Based on the size of the New Jersey adult population according to estimates from 2019 U.S. Census Bureau data (U.S. Census Bureau, 2020, these percentages translate into 298,575 New Jersey residents with alcohol abuse/dependence, 152,759 with drug abuse/dependence, and 62,493, with both alcohol and drug abuse/dependence.

Table 4- 1: Resident Adult Population Estimates for Substance Abuse and Dependence in the Last 12 Months

TOTAL NEW JERSEY RESIDENT ADULTS, 2019	**n** = 6,943,612
RESIDENTS REPORTING ALCOHOL ABUSE/DEPENDENCE	**n** = 298,575
RESIDENTS REPORTING DRUG ABUSE/DEPENDENCE	**n** = 152,759
RESIDENTS REPORTING ALCOHOL & DRUG ABUSE/DEPENDENCE	**n =** 62,493

C. CHARACTERISTICS OF NEW JERSEY ADULTS WHO MET CRITERIA FOR SUBSTANCE ABUSE OR DEPENDENCE, OVERALL AND BY SUBSTANCE TYPE

C1. Abuse or Dependence Overall (Table 4-2)

- Within the population, males were twice as likely as females to meet criteria for abuse or dependence in the last 12 months (10.0% vs. 4.9%).

- By age, the highest proportion of residents with a positive screen was found among young adults between the ages of 21 and 35, with 17.4% of 21–25-year-olds and 11.4% of 26- to 34-year-olds screening positive. About 7.5% of 18–20-year-olds, 6.7% of those aged 35 to 49, and 5.1 of those 50 or older screened positive for abuse/dependence.

Table 4- 2: Characteristics of All Adults Who Met Criteria for Substance Abuse or Dependence

Demographics		Proportion of New Jersey Population Screening Positive for Abuse or Dependence (%)
New Jersey Total Population		***7.4***
Gender	Males	10.0
	Females	4.9
Age	18-20	7.5
	21-25	17.4
	26-34	11.4
	35-49	6.7
	50+	5.1
Race/Ethnicity	White	7.3
	Black	8.1
	Hispanic	7.7
	Asian	3.5
Education	Less than H.S.	6.9
	H.S. Grad.	7.9
	Some College	8.9
	College Graduate or higher	6.1

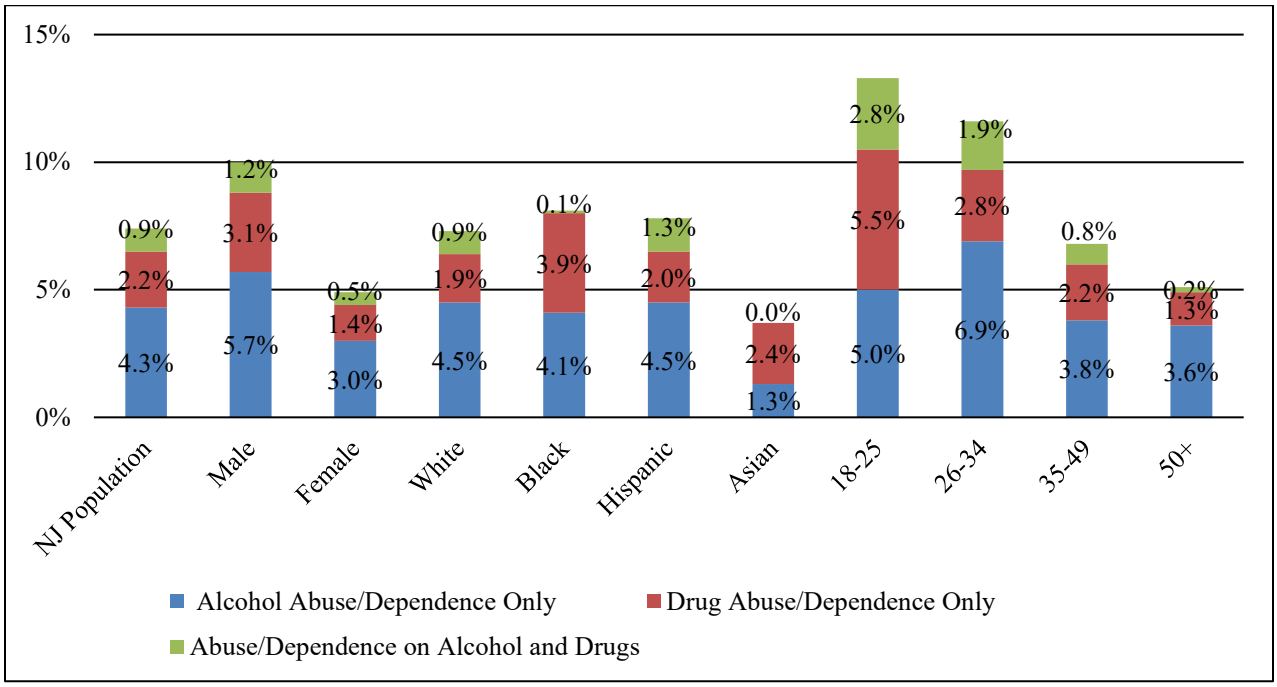
- By race/ethnicity, Whites (7.3%), African Americans (8.1%), and Hispanics (7.7%) were equally likely to screen positive for abuse/dependence. Asians had the lowest proportion with a positive screen of all racial/ethnic groups (3.5%).

- By education status, adults with some college education had the highest likelihood of a positive screen (8.9%), followed by 7.9% of high school graduates, 6.9% of adults with less than a high school education, and 6.1% of college graduates.

C2. Abuse or Dependence by Substance Type (Figure 4-2)

- With respect to type of abuse/dependence, males were approximately twice as likely as females to screen positive for alcohol only (5.7% vs 3.0%), drugs only (3.1% vs 1.4%), and both alcohol and drugs (1.2% vs. 0.5%).

Figure 4- 2: Abuse or Dependence in the Last 12 Months by Gender, Race/Ethnicity and Age: All Adults



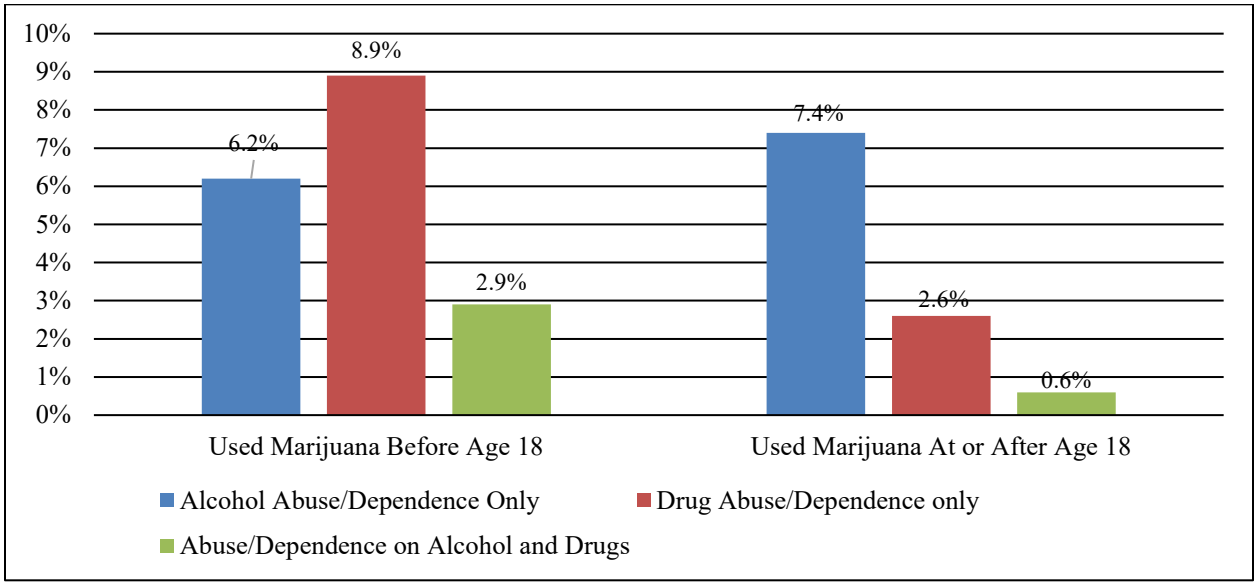
- By race/ethnicity, the proportion of positive screens for alcohol alone was similar among Whites (4.5%), Hispanics (4.5%) and African Americans (4.1%) and lowest among Asians (1.3%). African Americans had the highest proportion of positive screens for drugs alone (3.9%), followed by Asians (2.4%), Hispanics (2.0%) and Whites (1.9%). Asians (0%) and African Americans (0.1%) were the least likely, and Hispanics (1.3%) and Whites (0.9%) the most likely, to screen positive for both substances.

- By age, positive screens in all categories of abuse/dependence were highest among those under age 35, with those aged 18-25 being the most likely to screen positive for drugs with and without alcohol. Thus, problems with alcohol only were found in 6.9% of 26–34-year-olds and 5.0% of those aged 18-25. Among those aged 35 and older, 3.6%-3.8% screened positive for alcohol only. Positive screens for drugs only were found in 5.5% of adults aged 18-25, 2.8% of 26–34-year-olds, 2.2% of 35–49-year-olds and 1.3% of those aged 50+. Residents aged 18-25 were also the most likely to screen positive for both substances (2.8%), followed by those aged 26-34 (1.9%). Among those 35 and older, 0.2%- 0.8% were positive for both substances.

D. SUBSTANCE ABUSE/DEPENDENCE BY AGE OF FIRST USE OF MARIJUANA AND ALCOHOL

D1. Age of First Marijuana Use (Figure 4-3)

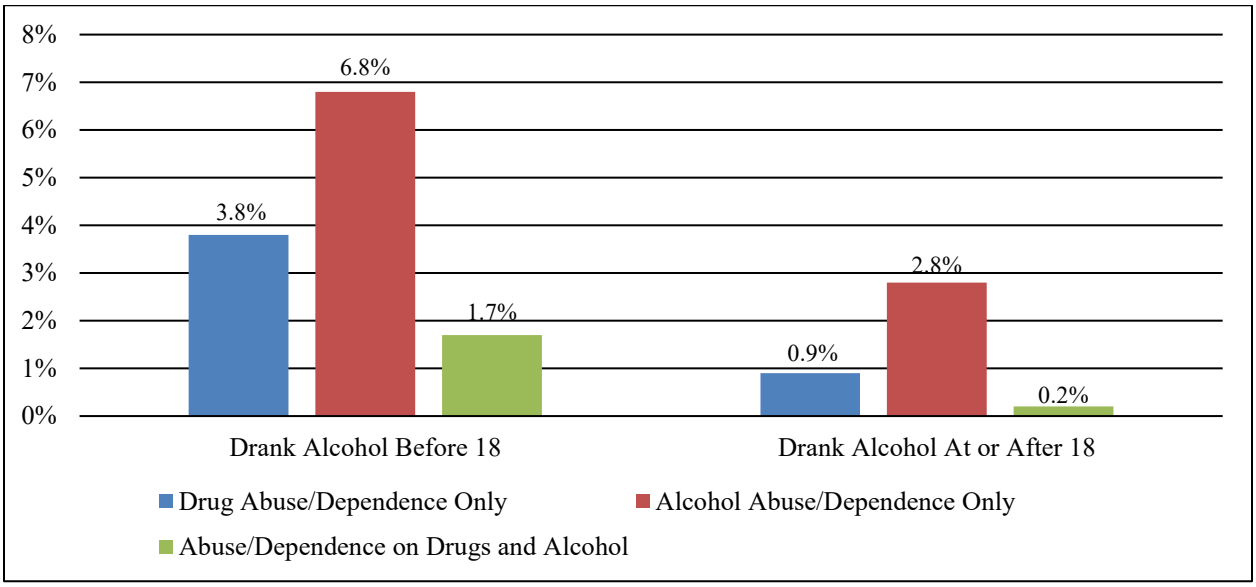
- Substance abuse/dependence on drugs alone, and in combination with alcohol, were highly associated with the early use of marijuana. However, early marijuana use was not associated with an elevated risk of alcohol abuse/dependence without the concurrent abuse of drugs.
- Those who first used marijuana before the age of 18 were more than three times as likely as later initiators to screen positive for drug abuse/dependence alone (8.9% vs. 2.6%) and more than four times as likely to screen positive for abuse/dependence on both drugs and alcohol (2.9% vs. 0.6%).
- However, early marijuana initiators were slightly less likely than later initiators to screen positive for abuse/dependence on alcohol only (6.2% vs. 7.4%)
- **Figure 4- 3: Prevalence of Substance Abuse and Dependence by Age of First Marijuana Use: All Adults**



D2. Age of First Alcohol Use (Figure 4-4)

- Alcohol use before age 18 was also associated with a greater likelihood of substance abuse/dependence. Unlike early marijuana initiators, however, early drinkers were at risk for abuse/dependence on both alcohol and drugs, alone or in combination.
- Residents who first drank alcohol before age 18 had a five times higher risk of drug abuse/dependence than later drinkers (3.8% vs. 0.9%) and more than twice the risk of abuse/dependence on alcohol alone (6.8% vs. 2.8%).
- Early drinkers were eight times as likely as later drinkers to abuse or be dependent on both alcohol and drugs (1.7% vs. 0.2%).

Figure 4- 4: Prevalence of Substance Abuse and Dependence in the Last 12 Months by Age of First Alcohol Use: All Adults



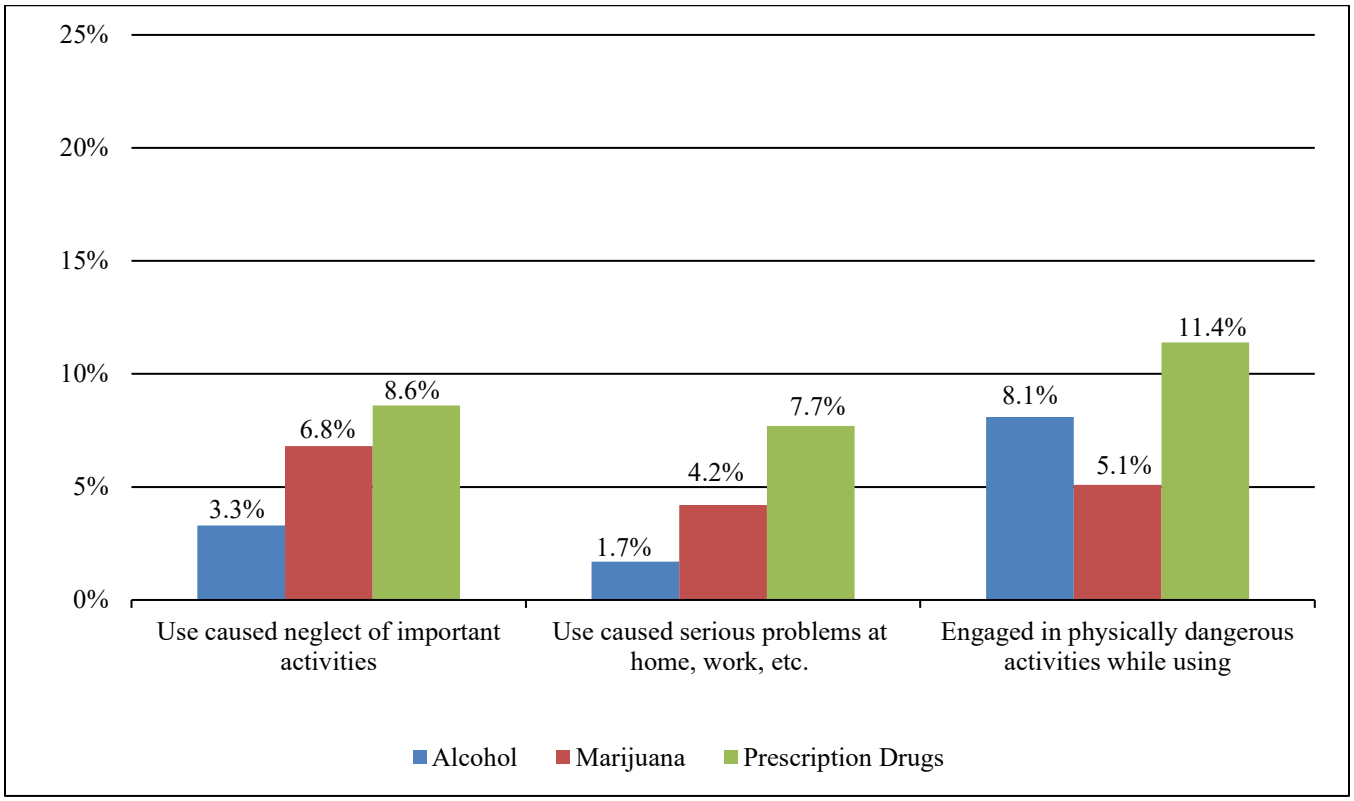
E. RISK BEHAVIORS ASSOCIATED WITH SUBSTANCE ABUSE

In this section, we examine risk behaviors associated the abuse of alcohol and the two most commonly reported illicit drugs, marijuana and psychotherapeutics. The analyses are based on all self-reported users of these substances and includes both those who do and do not screen positive for abuse or dependence.

E1. General Risk Behaviors (Figure 4-5)

- Although users of all substances reported negative experiences associated with their use, these were reported at a somewhat higher rate by adults who misused prescription drugs than by users of alcohol or marijuana.
- Approximately 9% of psychotherapeutic users reported neglecting important activities, compared to 7% of marijuana users and 3% of alcohol users.
- About 8% of prescription drug users reported serious problems at home connected with their substance use, compared to 4% of marijuana users and 2% of alcohol users.
- Engaging in activities that were physically dangerous while under the influence of these substances was reported by 11% of prescription drug misusers, 8% of alcohol users and 5% of marijuana users.

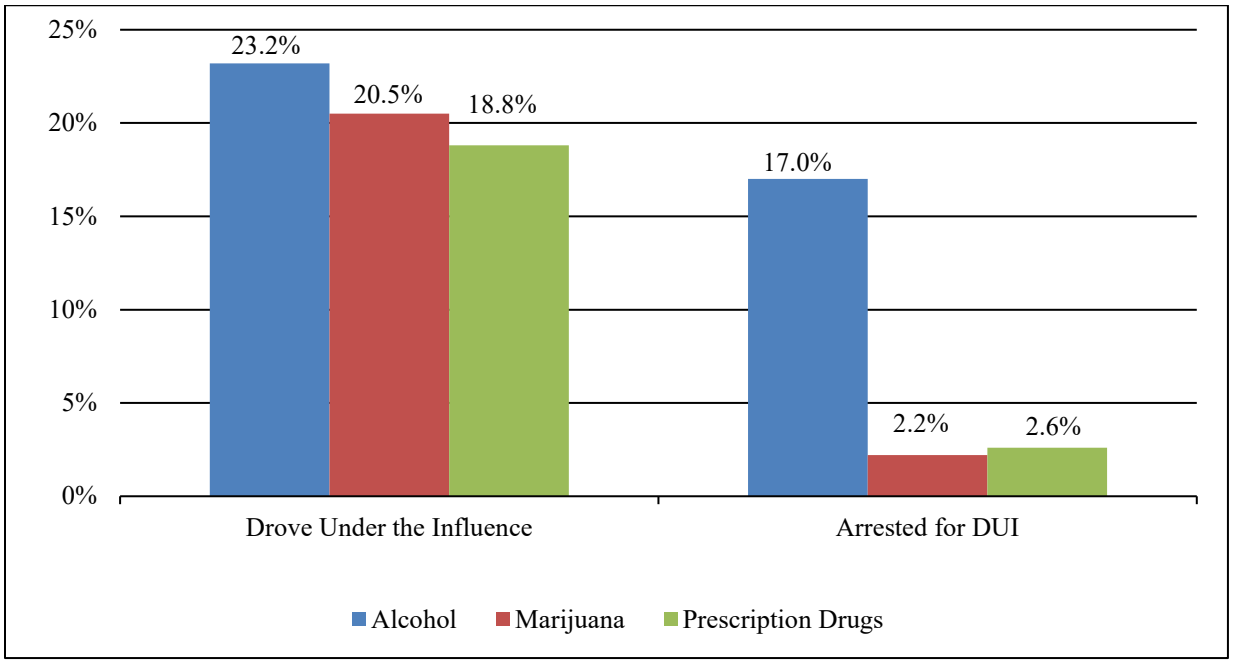
Figure 4- 5: Behaviors Associated with the Use of Alcohol, Marijuana and Prescription Drugs in the Last 12 Months



E2. Driving Behavior (Figure 4-6)

- Driving while under the influence was a more common experience than other reported negative behaviors, engaged in by 23% of alcohol users, 21% of marijuana users and 19% of psychotherapeutic users.
- Despite similarities across substances in the proportion driving after use, alcohol users were substantially more likely than users of marijuana or psychotherapeutics to have been arrested for driving under the influence (17% vs. 2%-3%).

Figure 4- 6: Driving Behaviors Associated with the Use of Alcohol, Marijuana and Prescription Drugs in the Last 12 Months



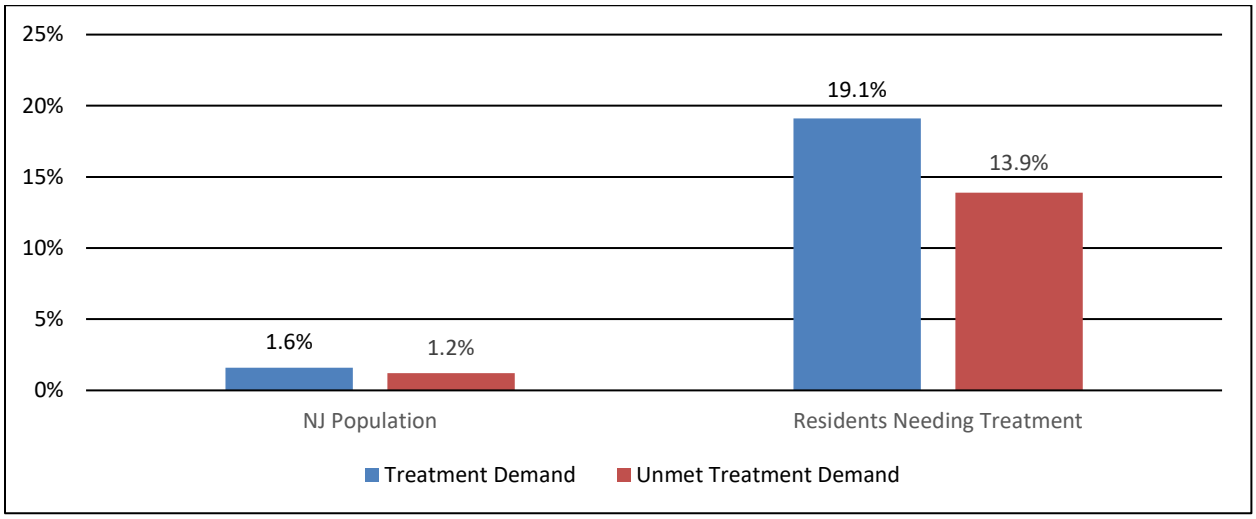
F. SUBSTANCE ABUSE TREATMENT DEMAND AND UNMET DEMAND

In this section we explore the extent to which New Jersey residents had a desire for addiction treatment as well as the extent to which those wanting treatment were able to obtain it. As described earlier, treatment demand was calculated by summing the total number of individuals who wanted addiction treatment and received all, some or none of what they felt they needed. Unmet treatment demand represents the sum of individuals who wanted treatment but received none, or only some, of the treatment they felt they needed. Demand and unmet demand are examined for all residents, those screening positive for abuse/dependence and those in need of treatment, evidenced by either a positive abuse/dependence screen or treatment in the last 12 months.

F1. New Jersey Population and Adults Needing Treatment (Figure 4-5)

- In the New Jersey population as a whole, treatment demand and unmet demand in the last 12 months averaged under 2%.

Figure 4- 7: Demand and Unmet Demand for Substance Abuse Treatment in the Last 12 Months: New Jersey Population and All Adults Needing Treatment



- Among adults needing treatment, however, 19% wanted substance abuse treatment and 14% reported either not receiving any desired treatment, or not receiving all the treatment they felt they needed.

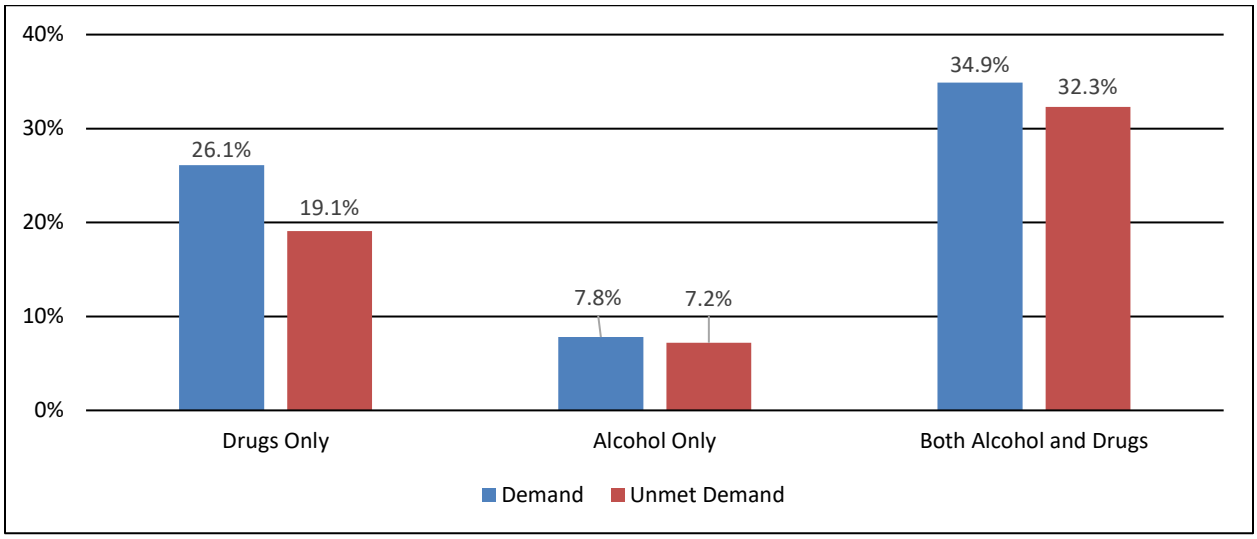
F2. Demand and Unmet Demand by Type of Substance Abuse Problem (Figure 4-8)

- Adults screening positive for both an alcohol and drug use problem had the highest treatment demand (35%) and unmet treatment demand (32%) for treatment of all those in need.

- Those screening positive for drug abuse/dependence only reported the next highest level of demand for treatment (26%), with 20% reporting unmet demand.

- Adults with alcohol use problems only reported the lowest treatment demand of all groups (8%), with 7% reporting unmet demand.

Figure 4- 8: Demand and Unmet Demand for Substance Abuse Treatment in the Last 12 Months by Type of Problem: Adults Screening Positive for Substance Abuse/Dependence

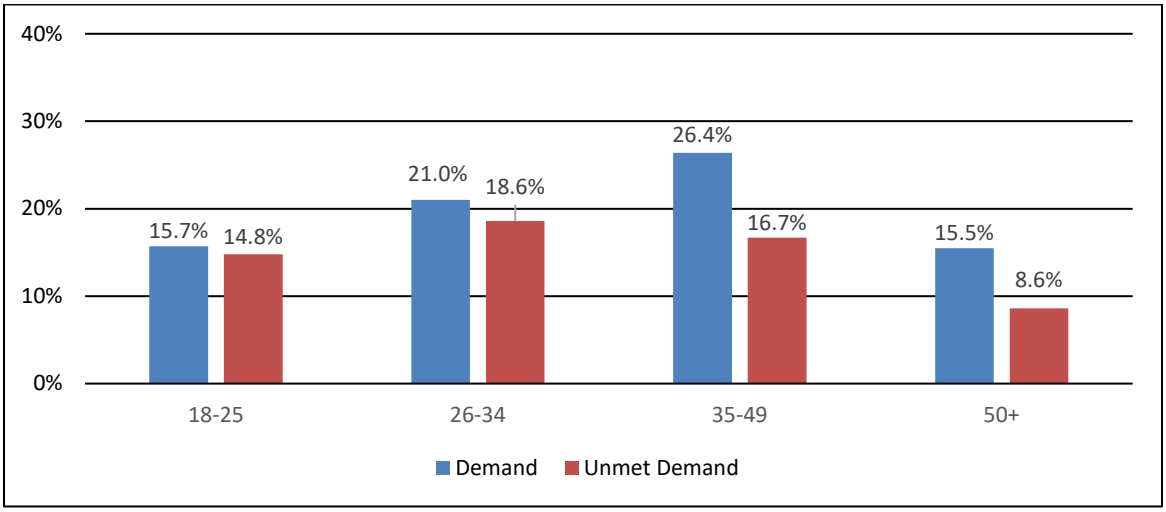


F3. Demand and Unmet Demand by Age, Gender and Race/Ethnicity: Adults Needing Treatment

Age (Figure 4-9)

- Among adults needing treatment, treatment demand increased by age up to age 50, then fell substantially among those aged 50 and older.
- Thus, demand rose from 16% of 18–25-year-olds to 21% of 26–34-year-olds and 26% of 35–49-year-olds, then decreased to 16% among those 50 and older.
- While treatment demand was comparable in the youngest (18-25) and oldest (50+) age groups, unmet demand averaged 15% in those aged 18-25 and only 9% in those 50 and older. Unmet demand was 19% in 26–34-year-olds and 17% in 35–49-year-olds.

Figure 4- 9: Demand and Unmet Demand by Age: All Adults Needing Treatment



Gender, Race/Ethnicity and Education (Table 4-3)

- In terms of other demographic characteristics, women had both a higher demand for treatment than men (22% vs. 18%) and a higher unmet demand (18% vs 12%).
- By race/ethnicity, African Americans had the highest demand for treatment of all racial/ethnic groups (27% vs. 21% for Asians, 20% for Whites and 17% for Hispanics). Unmet demand for treatment was highest among Asians, however (21% vs. 15% for Whites, 13% for African Americans and 14% for Hispanics).

Table 4- 3: Treatment Demand and Unmet Demand by Gender and Race/Ethnicity: All Adults Needing Treatment

Demographics		**Treatment Demand (%)**	**Unmet Treatment Demand (%)**
All Adults Needing Treatment (n=525)		**16.5**	**13.5**
Gender	Males	17.6	11.8
	Females	22.3	18.1
Race/ Ethnicity	White	19.5	14.7
	Black	27.3	12.8
	Hispanic	17.0	14.3
	Asians	21.1	21.1
Education	Less than high school	22.0	16.0
	High school graduate	24.5	16.7
	Some college	21.0	15.3
	College graduate or higher	11.6	9.2

- By education status, adults with a college education or better had the lowest rates of treatment demand (12%) and unmet demand (9%) of all educational groups. Treatment demand among non-college graduates ranged from 21% among those with some college to 25% among high school graduates. Similarly, rates of unmet demand ranged from 15% of those with some college to 17% of high school graduates.

G. TREATMENT ACCESS AND UTILIZATION PATTERNS

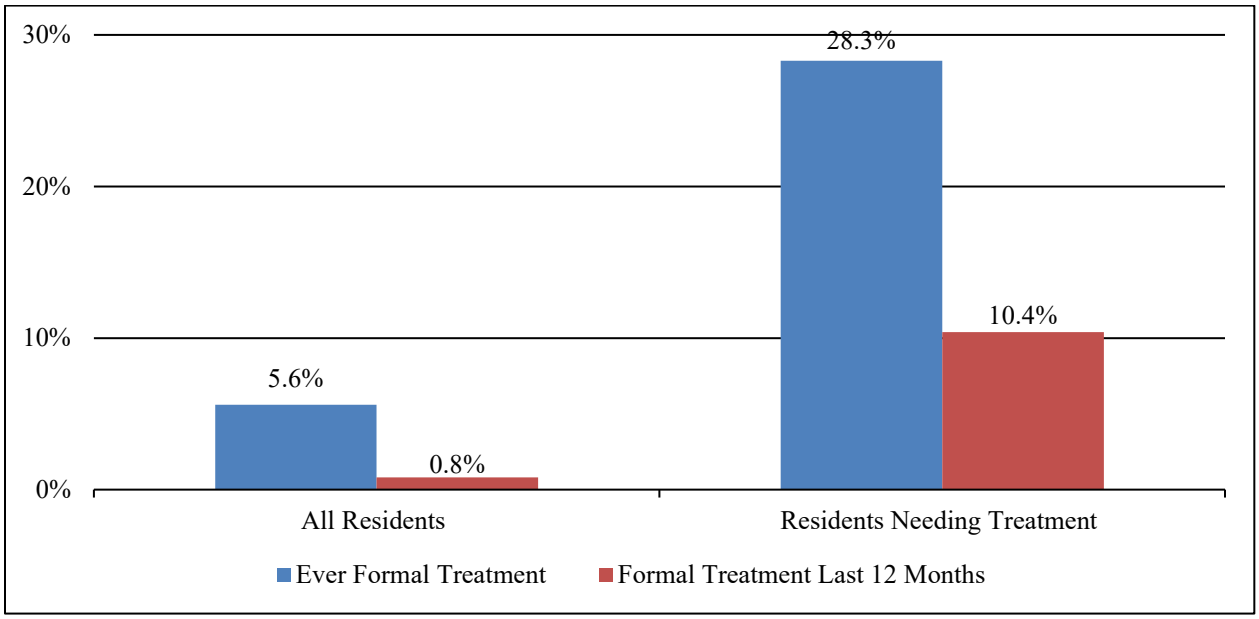
In this section we look at access to substance abuse treatment among residents as a whole and among residents needing substance abuse treatment. As noted in the introduction to this chapter, residents needing substance abuse treatment are defined as those who screen positive for abuse or dependence on either alcohol and/or drugs OR who report receiving substance abuse treatment in the past 12 months. In New Jersey, the proportion needing treatment is only slightly higher than the proportion screening positive for abuse or dependence (7.6% vs. 7.4%), indicating that a small proportion of individuals who received treatment in the last year did not screen positive for abuse/dependence in the survey. While most charts in this section focus on all residents or those needing treatment as defined above, we also examine treatment access according to type of abuse/dependence reported by those with a positive screen for these disorders.

G1. Prevalence of Treatment: All Adults and Adults Needing Treatment (Figure 4-10)

- Approximately 6% of all residents have ever received formal substance abuse treatment in their lifetime, with less than 1% reporting formal treatment in the past 12 months.

- Among residents needing treatment, 28% received formal substance abuse treatment in their lifetime, and 10% received treatment in the last 12 months.

Figure 4- 10: Lifetime and Past Year Receipt of Formal Treatment: All Adults and Adults Needing Treatment

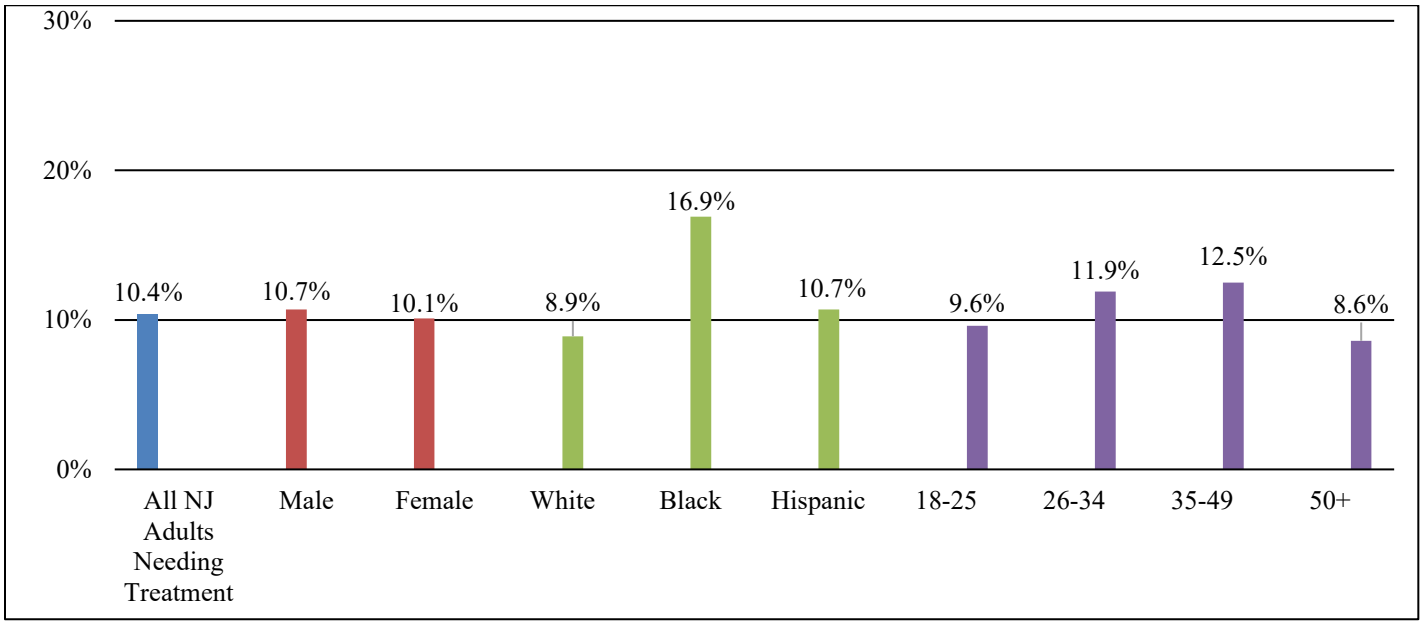


G2. Demographic Characteristics of Adults Receiving Treatment in Past 12-Months: Adults Needing Treatment

Gender, Age and Race/Ethnicity (Figure 4-11)

- Men and women were equally likely to have received formal treatment in the last 12 months (11% vs. 10%, respectively).
- By race/ethnicity, African Americans were the most likely to have received formal treatment (17%), followed by Hispanics (11%) and Whites (9%).
- By age, the highest treatment access rate was found among residents aged 35-49 (13%) followed by 26–34-year-olds (12%), 18–25-year-olds (10%) and those 50 and older (9%).

Figure 4- 11: Receipt of Formal Treatment in the Last 12 Months by Gender, Age, and Race/Ethnicity: All Adults Who Needed Treatment

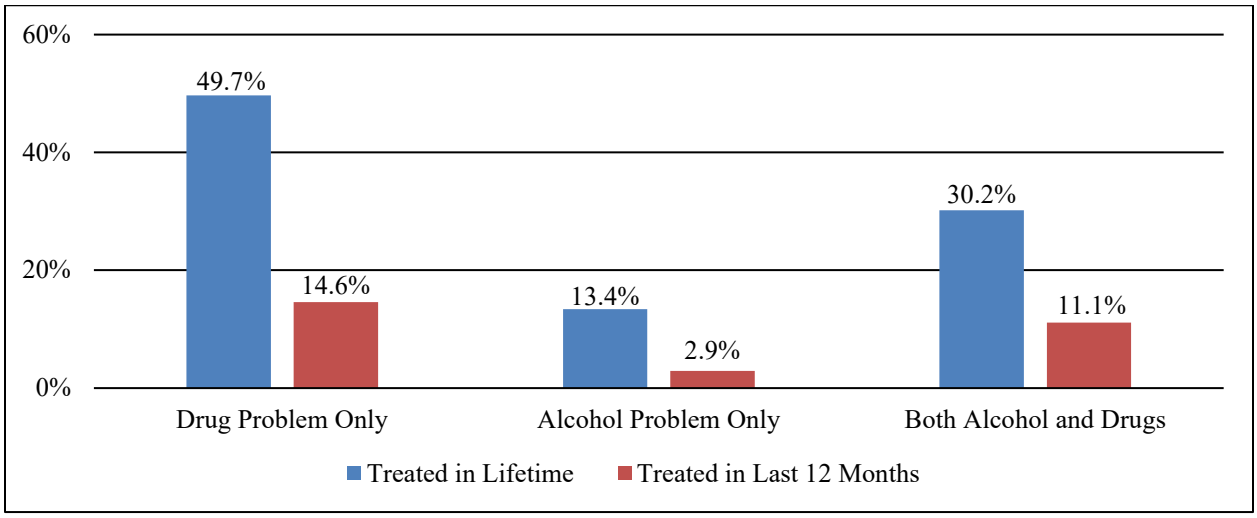


G3. Treatment Access by Type of Problem

- Among adults with a positive screen for substance abuse/dependence in the past year, those with an alcohol problem only were substantially less likely than those with drug problems to have accessed substance abuse treatment in their lifetime or in the last year (Figure 4-12).

- Thus, 13% of those with alcohol problems only had been treated in their lifetime and 3%, in the last 12 months. In contrast, 50% of those with drug problems alone and 30% with both alcohol and drug problems had received lifetime treatment and 15% and 11%, respectively, were treated in the last 12 months.

Figure 4- 12: Receipt of Formal Treatment in Lifetime and Last 12 Months by Type of Substance Problem: All Adults Who Screened Positive for Substance Abuse/Dependence



CHAPTER 5

COUNTY VARIATIONS IN ALCOHOL, MARIJUANA, ILLICIT DRUG USE AND SUBSTANCE ABUSE AND DEPENDENCE

A. INTRODUCTION

This chapter examines county differences in the prevalence of alcohol use, marijuana use, other illicit drug use, and substance abuse/dependence. Data are reported by county.

Counties vary a great deal in their population size, population mix and their proximity to major urban centers such as Philadelphia and New York. The state also has several counties that serve as tourist destinations because of their beaches, with Atlantic County also having the Casino center (Atlantic City) in addition to its shores. With such diversity of the state by county, it is natural to expect corresponding variations in substance use and substance abuse and/or dependence.

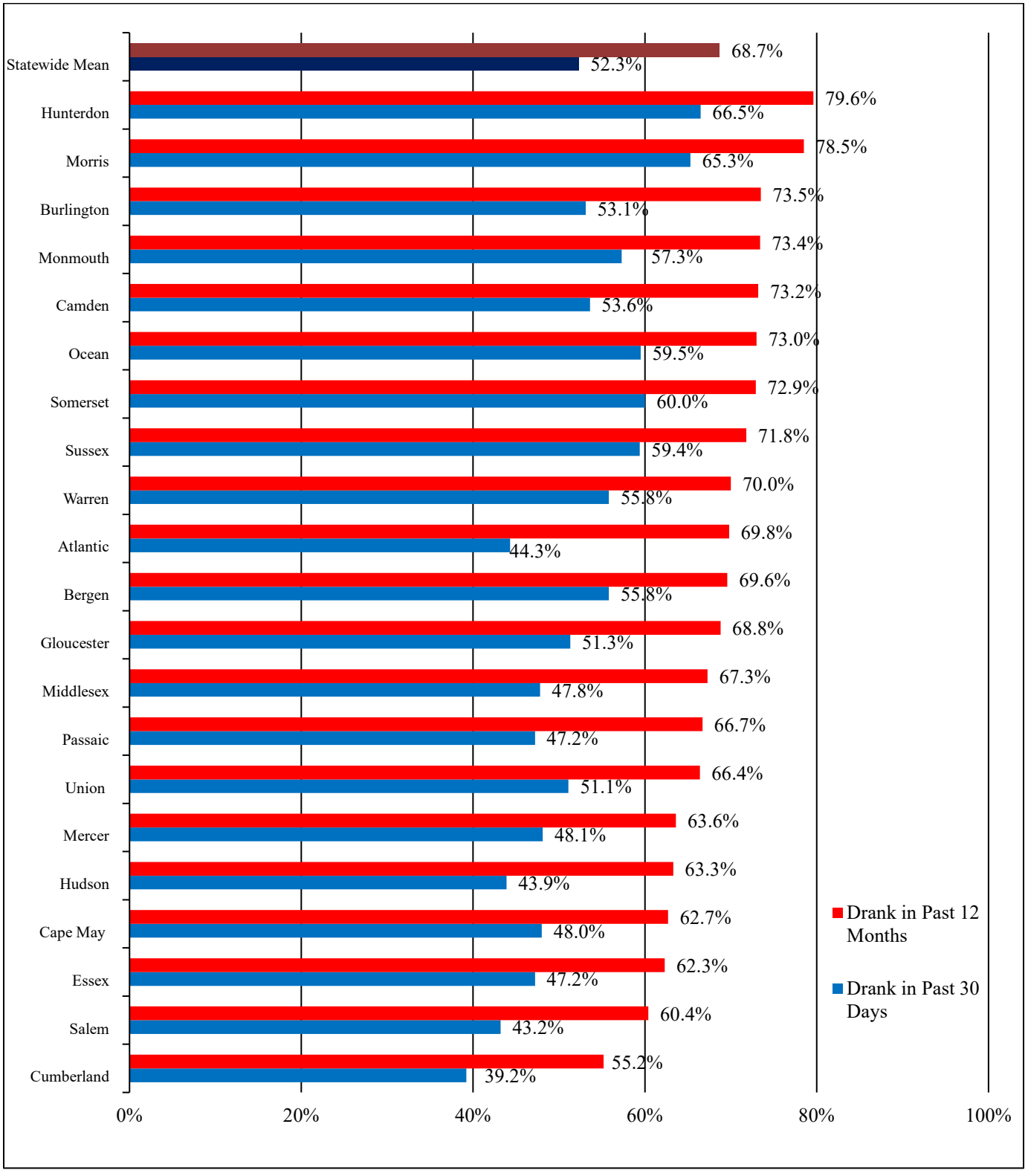
B. ALCOHOL USE

- With the exception of Cumberland County, in which alcohol use rates were the lowest, more than 60% of residents in each county reported drinking in the past year, and more than 40% reported drinking in the past 30 days (Figure 5-1).

- Past year and past 30-day alcohol use was the most prevalent in Hunterdon and Morris Counties with 80% and 79%, respectively, reporting drinking in the past year, and 67% and 65% drinking in the last 30 days, respectively.

- Salem and Cumberland Counties, in contrast, had the lowest rates of past-year (60% and 55%, respectively) and past-30-day (43% and 39%, respectively) alcohol use.

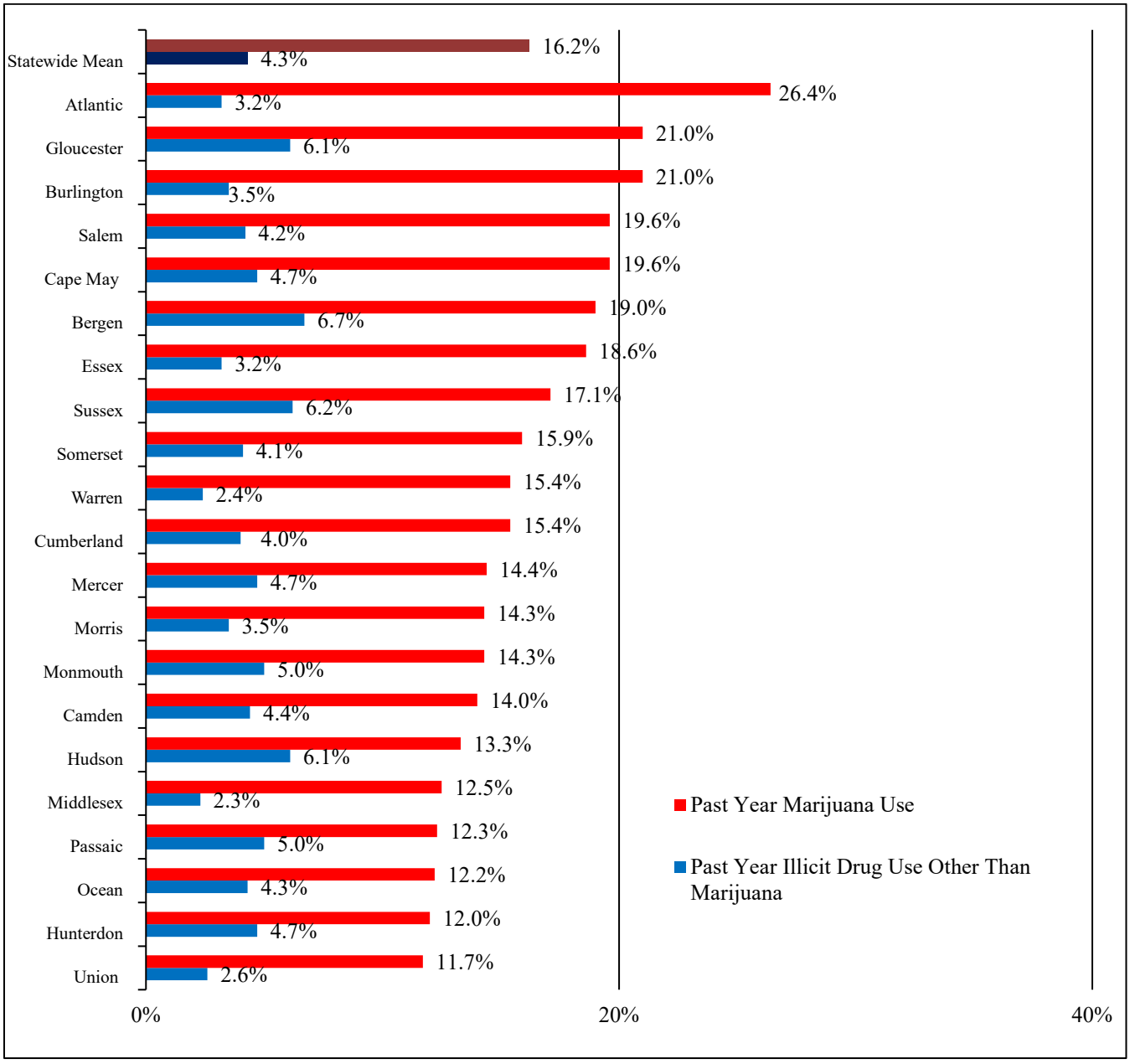
Figure 5- 1: Past Year and Past 30-Day Alcohol Use by County



C. LLICIT DRUG USE: MARIJUANA AND DRUGS OTHER THAN MARIJUANA

- In terms of marijuana use (Figure 5-2), Atlantic County led all NJ counties in its rates of past year (26%) use. Gloucester and Burlington Counties were second in prevalence, with 21% of residents in each county using marijuana in the past year. Residents of Passaic, Ocean, Hunterdon and Union County were the least likely to report marijuana use in the past 12 months (12%).

Figure 5- 2: Past Year Marijuana and Illicit Drug Use (not including Marijuana) by County



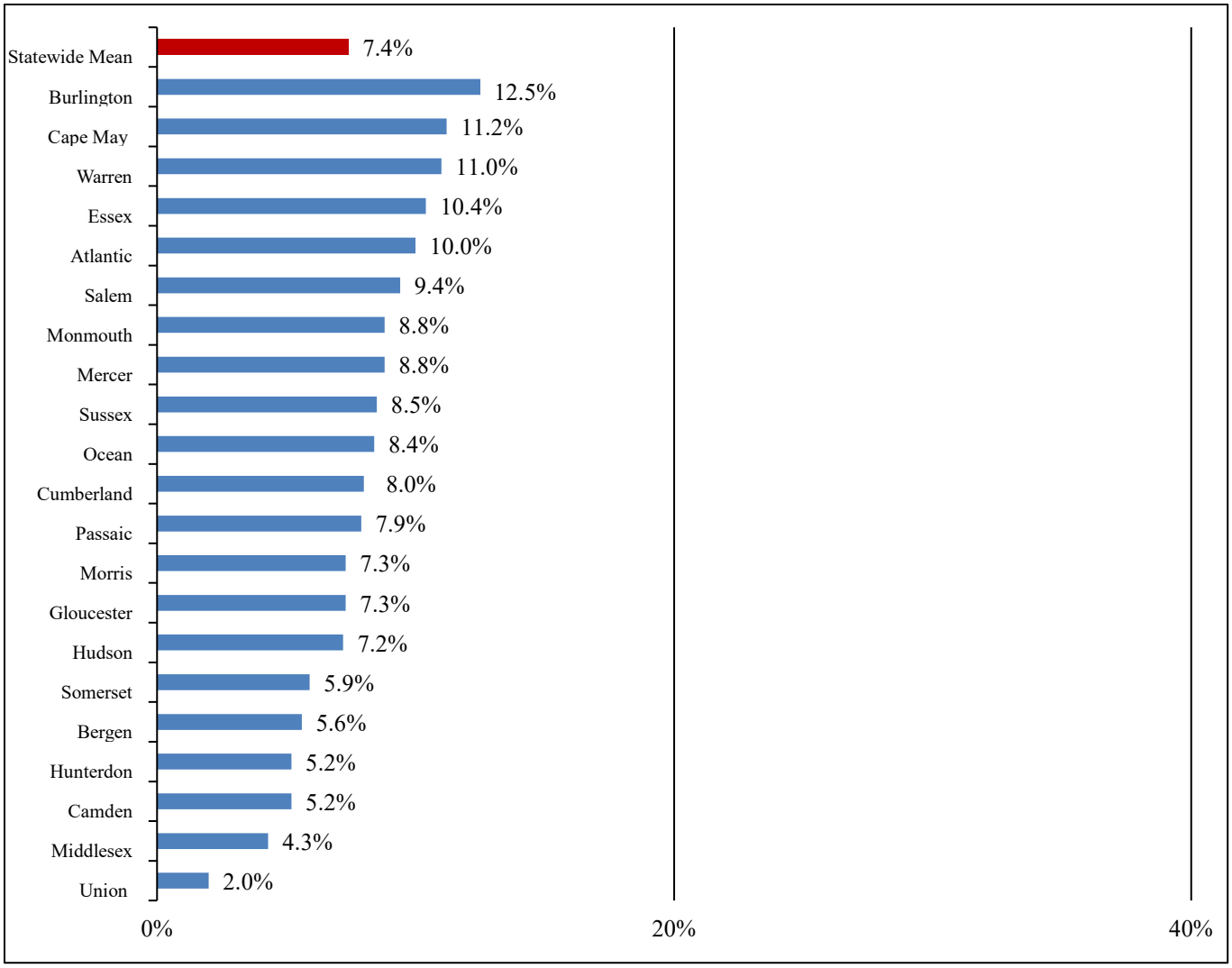
- In terms of past year illicit drug use other than marijuana, Bergen County had the highest rate of use (7%), followed by Sussex (6%), Gloucester (6%), and Hudson (6%). Residents of Warren, Middlesex, and Union were the least likely to report illicit drug use other than marijuana in the past 12 months (less than 3% for each county).

D. SUBSTANCE ABUSE AND DEPENDENCE

D1. Overall Rates of Abuse and Dependence (Figure 5-3)

- Burlington County (12.5%) had the highest rate of residents meeting the criteria for substance abuse or dependence on any substance of all New Jersey Counties. Following Burlington were Cape May (11.2%), Warren (11.0%), Essex (10.4%), and Atlantic (10.0%).

Figure 5- 3: Abuse and Dependence in Past Year by County

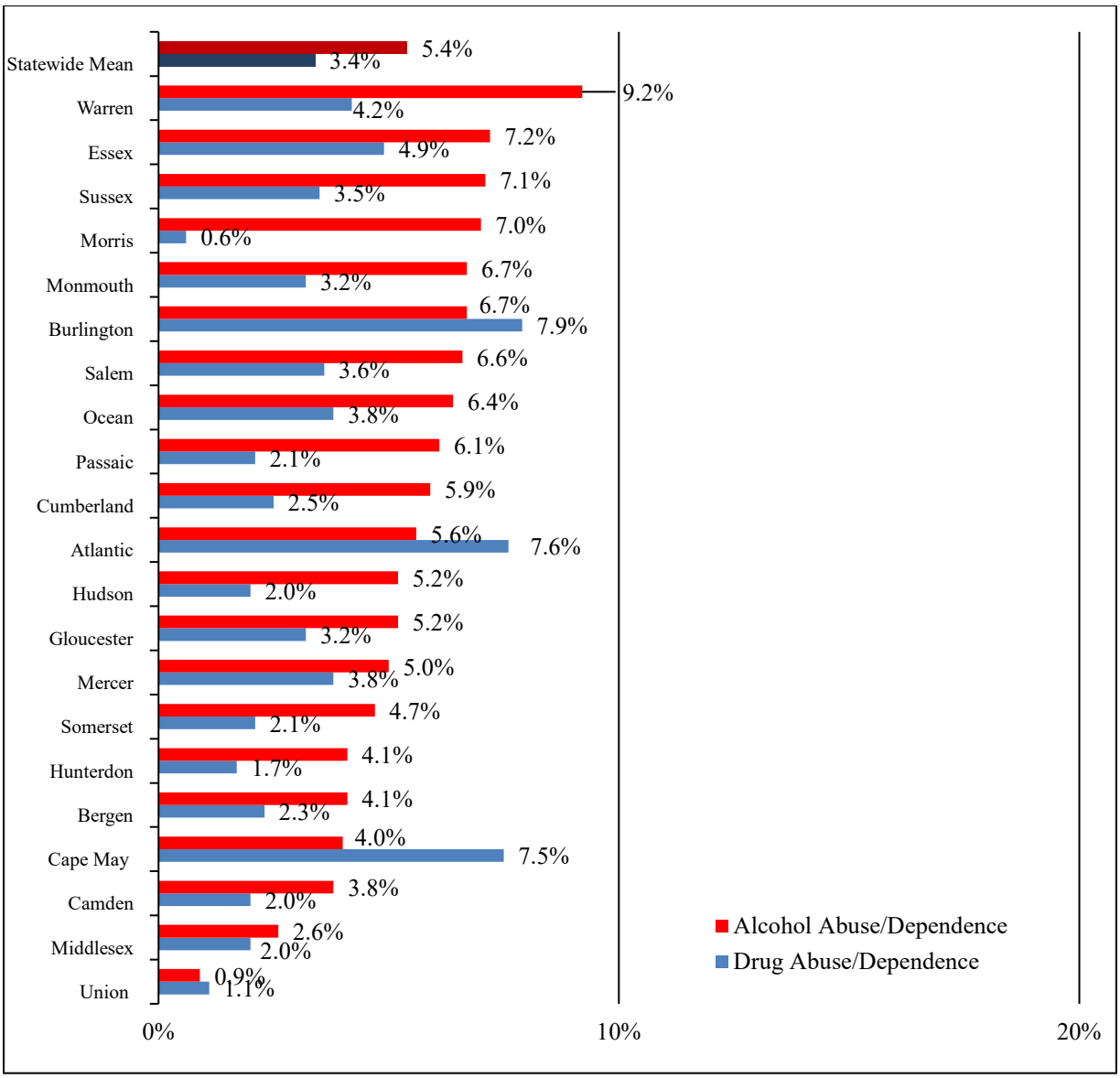


- Union County had the lowest prevalence of substance abuse or dependence (2.0%) of all New Jersey counties, with Middlesex County being second lowest in prevalence (4.3%).
- Overall, rates of abuse/dependence in the remaining counties ranged from 5% to 9%.

D2. Abuse and Dependence by Substance Type (Figure 5-4)

- Alcohol accounted for the majority of abuse/dependence problems in 17 of New Jersey's 21 counties (71%). In only Burlington, Atlantic and Cape May Counties did rates of drug abuse/dependence substantially exceed those of alcohol abuse/dependence.

Figure 5- 4: Alcohol Abuse/Dependence and Drug Abuse/Dependence in Past Year by County



- The highest prevalence of alcohol abuse/dependence was found in Warren County (9.2%) and the next highest, in Essex, Sussex and Morris Counties, where rates ranged from 7.0%-7.2%.

- The lowest prevalence of alcohol problems was found in Union (0.9%), Middlesex (2.6%) and Camden (3.8%) Counties.

- The highest prevalence of drug problems was found in Burlington, Atlantic and Cape May Counties, where rates ranged from 7.5%-7.9%, and the lowest prevalence, in Morris (0.6%), Union (1.1%) and Hunterdon (1.7%) Counties.

E. SUBSTANCE ABUSE TREATMENT DEMAND AND UNMET DEMAND

- Treatment demand and unmet demand also varied considerably across New Jersey counties (Table 5-1).

- The highest demand for treatment was found in Mercer (3.8%), Essex (3.5%), Warren (3.6%), Cumberland (3.4%) and Salem (3.3%) Counties. The lowest demand was reported in Morris and Middlesex (.1% each), Hunterdon and Union (0.3% each), Passaic (0.6%) and Hudson (0.9%) Counties.

Table 5- 1: Treatment Demand and Unmet Demand by County: All Residents

COUNTY	% DEMAND	% UNMET DEMAND
Atlantic	2.9	1.5
Bergen	1.5	0.6
Burlington	2.6	2.6
Camden	1.7	1.2
Cape May	1.9	1.2
Cumberland	3.4	2.5
Essex	3.5	1.7
Gloucester	1.5	1.2
Hudson	0.9	0.9
Hunterdon	0.3	0.1
Mercer	3.8	3.8
Middlesex	0.1	0.1
Monmouth	2.9	2.9
Morris	0.1	0.1
Ocean	1.4	1.2
Passaic	0.6	0.6
Salem	3.3	3.0
Somerset	1.5	1.2
Sussex	2.4	2.4
Union	0.3	0.3
Warren	3.6	2.4
STATE	1.7	1.0

- Mercer County also reported the highest level of unmet demand among all counties (3.8%), followed by Salem (3.0%), Monmouth (2.9%), Burlington (2.6%) and Cumberland (2.5%) Counties.

- The lowest unmet demand was reported in Hunterdon, Middlesex and Morris Counties (.1% each), followed by Union (0.3%), Bergen and Passaic (0.6% each) and Hudson (0.9%) Counties.

F. SUBSTANCE ABUSE TREATMENT ACCESS

- Substantial variation existed across counties in the extent to which county residents received substance abuse treatment in the past 12 months (Table 5-2).

Table 5- 2: Receipt of Formal Addiction Treatment in the Past Year by County: All Residents and Residents Needing Treatment

COUNTY	ALL RESIDENTS % Treated	RESIDENTS NEEDING TREATMENT % Treated
Atlantic	1.5	12.8
Bergen	0.9	15.8
Burlington	1.2	9.5
Camden	0.9	14.3
Cape May	1.6	13.5
Cumberland	1.5	18.5
Essex	1.7	15.8
Gloucester	0.1	0.1
Hudson	0.3	4.2
Hunterdon	0.3	5.3
Mercer	0.3	3.3
Middlesex	0.1	0.1
Monmouth	1.8	19.4
Morris	0.1	0.1
Ocean	1.4	16.1
Passaic	0.1	0.1
Salem	1.5	15.6
Somerset	0.1	0.1
Sussex	1.2	13.8
Union	0.3	12.5
Warren	1.8	14.0
STATE	0.8	10.4

- Among all county residents, the highest treatment rates were found in Monmouth and Warren Counties (1.8% each), followed by Essex (1.7%), Cape May (1.6%) and Atlantic Cumberland and Salem Counties (1.5% each).
- Among residents who needed treatment, the highest treatment rate was also reported in Monmouth County (19.4%), followed by Cumberland (18.5%), Ocean (16.1%) and Bergen and Essex Counties (15.8% each).

CHAPTER 6

SUBSTANCE USE TRENDS: NEW JERSEY AND THE NATION

A. INTRODUCTION

This chapter compares the 2020 New Jersey Drug Use and Health Survey to comparable data from the six prior statewide surveys conducted in 1998, 2003, 2009, 2016, 2018 and 2019. It also compares substance use trends in New Jersey to those in the nation, comparing the combined 2018 and 2019 New Jersey data to combined 2018 and 2019 data from the National Survey on Drug Use and Health (NSDUH) (Center for Behavioral Health Statistics and Quality, 2020), the latest two years for which national data were available at the time of this report. National comparisons focus on the use of alcohol and selected drugs, as well as on substance abuse and dependence.

Because previously described methodological changes in the 2016 New Jersey survey affected both drug use reporting and calculations of substance abuse and dependence, we limited in-state comparisons since 1998 to alcohol use only, which was least affected by these changes. Time trends with respect to marijuana and illicit drug use, abuse and dependence, are limited to comparisons with New Jersey survey data beginning in 2016. However, because of further definition changes in 2018, trends in heavy and binge drinking are only presented for the years 2018-2020.

Because of a late start to data collection in the third survey year (2020), third-year data collection spilled over into the first 2 months of 2021. However, in the presentation below, data collected in 2020 and 2021 are combined and designated in the tables and charts in this chapter as occurring in survey year "2020."

Finally, because the sample size of Asians was too small in Survey Year Three to yield reliable estimates, trends in rates of substance use and abuse are not presented for Asians in all tables and charts below.

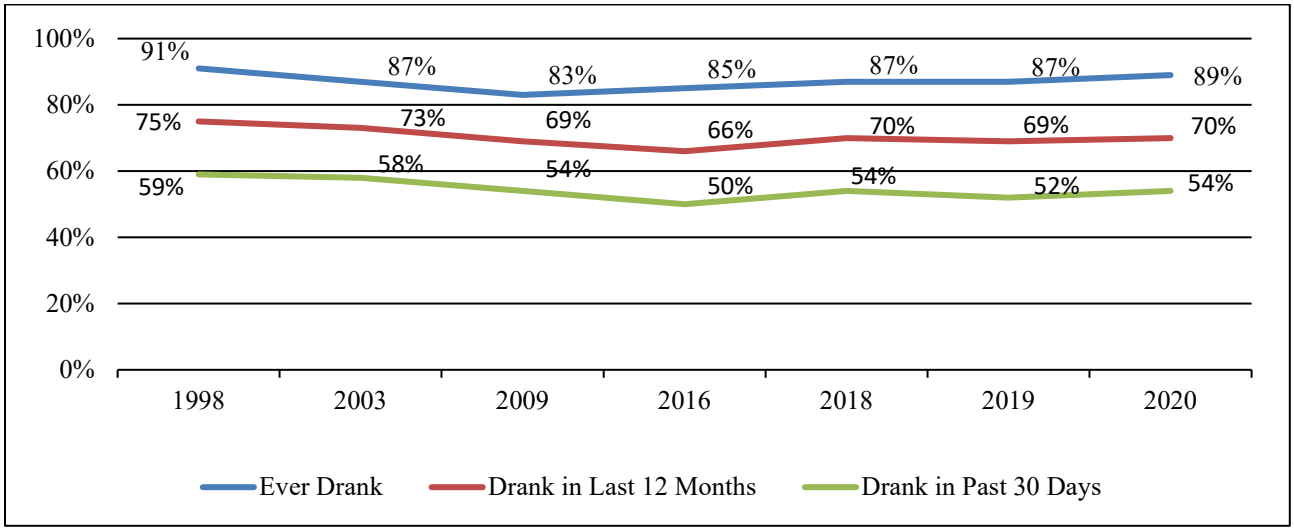
B. NEW JERSEY TRENDS: 1998-2020

B1. Alcohol Use

Prevalence of Recent and Current Use **(Figure 6-1)**

- In general, past 30-day and past-year alcohol use showed some downward trends between 1998 and 2016, with a slight uptick occurring in 2018 to 2020. Rates in 2020, however, remained below those observed in 1998.

Figure 6- 1: Alcohol Use - Lifetime, Past Year, Past 30 Days: New Jersey 1998-2020



- Between 1998 and 2009, lifetime alcohol use among residents declined from 91% to 83%; however, since 2016 lifetime use increased somewhat, rising to 85% in 2016, 87% in 2018 and 2019, and 89% in 2020.

- Similarly, past year use declined from 75% in 1998 to 66% in 2016 but increased to 70% in 2018 and remained stable at 69%-70% for 2019 and 2020, respectively. Alcohol use in the past 30 days declined from 59% in 1998 to 50% in 2016 but increased to 54% in 2018 and 2020.

Demographic Characteristics of Current Drinkers (Table 6-1)

- Since 1998, the rate of current drinking declined somewhat steadily among men but showed greater fluctuations among women. From 1998 to 2016, use among men dropped from 66% to 58%, rose slightly to 59% in 2018 then dropped to 57% in both 2019 and 2020. Use among women declined from 52% in 1998 to 43% in 2016 but increased to 49% in 2018 and to 52% in 2020.

- By age, 18–25-year-olds and 35–49-year-olds saw steady declines in current drinking between 1998 and 2016, followed by increases occurring in 2018 and continuing in subsequent years. Thus, drinking prevalence in this age group dropped steadily from 58% in 1998 to 37% in 2016 but rose to 48% in 2018 and to 50% in 2020. Similarly, among 35–49-year-olds, rates dropped from 64% in 1998 to 51% in 2016 but increased to 62% in 2018 and remained at 60% - 59% in 2019-2020, respectively. In contrast, drinking rates among 26- to 34-year-olds fluctuated between 57% and 63% across survey years except in 2019, when rates in this age group temporarily dropped to 53% before rising again to 61% in 2020. Current drinking remained relatively stable among

those 50 and older, ranging from 50% to 53% across survey years, except for a temporary rise to 56% in 2003.

- Current drinking substantially declined between 1998 and 2016 among both Hispanics (49% to 34%), and Asians (40% to 29%); however, both ethnic groups experienced a substantial increase in 2018 and subsequent years, with 2020 rates of current drinking climbing to 45% for Hispanics and 49% for Asians.
- Whites, in contrast, slightly decreased their rates of drinking over the survey years, dropping from highs of 65% in 1998 and 2003 to between 59%-61% in survey years between 2009-2020.
- Among African Americans, levels of drinking remained stable at 38%-39% across all survey years, with the exception of an increase to 43% in 2003 and 45% in 2020.

Table 6- 1: Past Month Use of Alcohol: New Jersey 1998-2020

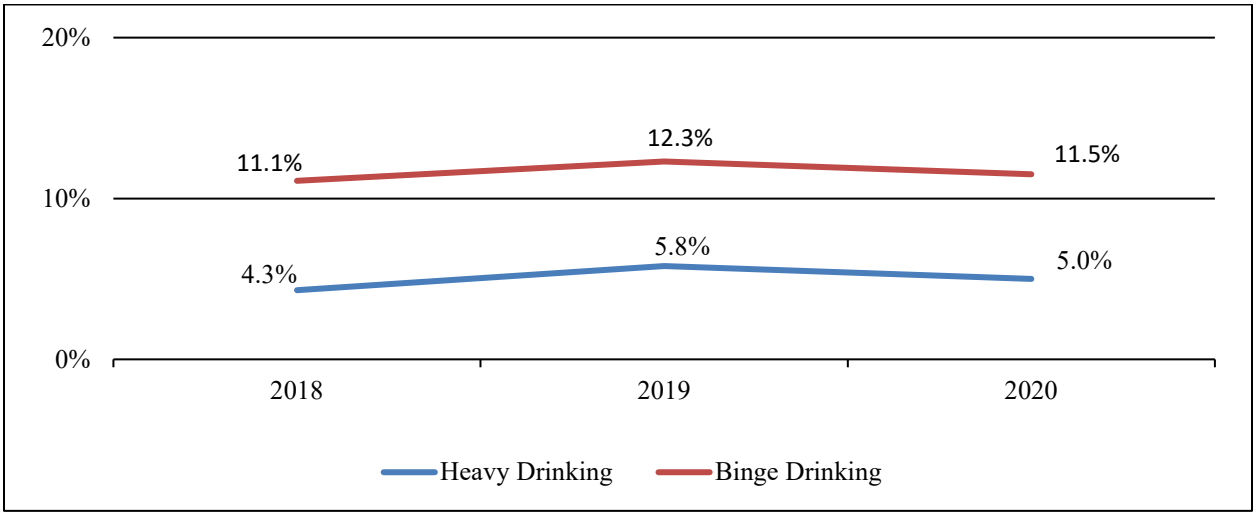
Demographics		**Drank Last 30 Days (%)**						
		1998	2003	2009	2016	2018	2019	2020
Gender	Male	66	65	60	58	59	57	57
	Females	52	53	49	43	49	47	52
Age	18-25	58	56	49	37	48	44	50
	26-34	63	60	57	60	57	53	61
	35-49	64	62	59	51	62	60	59
	50+	53	56	52	52	51	50	53
Race/Ethnicity	White	65	65	62	60	59	59	61
	Black	39	43	39	38	39	39	45
	Hispanic	49	44	38	34	46	43	45
	Asian	40	39	35	29	51	40	49

Prevalence of Problem Drinking (Figure 6-2)

As noted above, trends in heavy and binge drinking are presented for the years 2018-2020 only due to changes in the definitions of these variables at the time of the 2018 survey.

- Rates of problem drinking did not vary greatly from year to year between 2018 and 2020.
- Rates of binge drinking remained at between 11% and 12% during all three survey years and heavy drinking varied between 4% and 6%.

Figure 6- 2: Heavy and Binge Drinking in the Past 30 Days: New Jersey 2018-2020



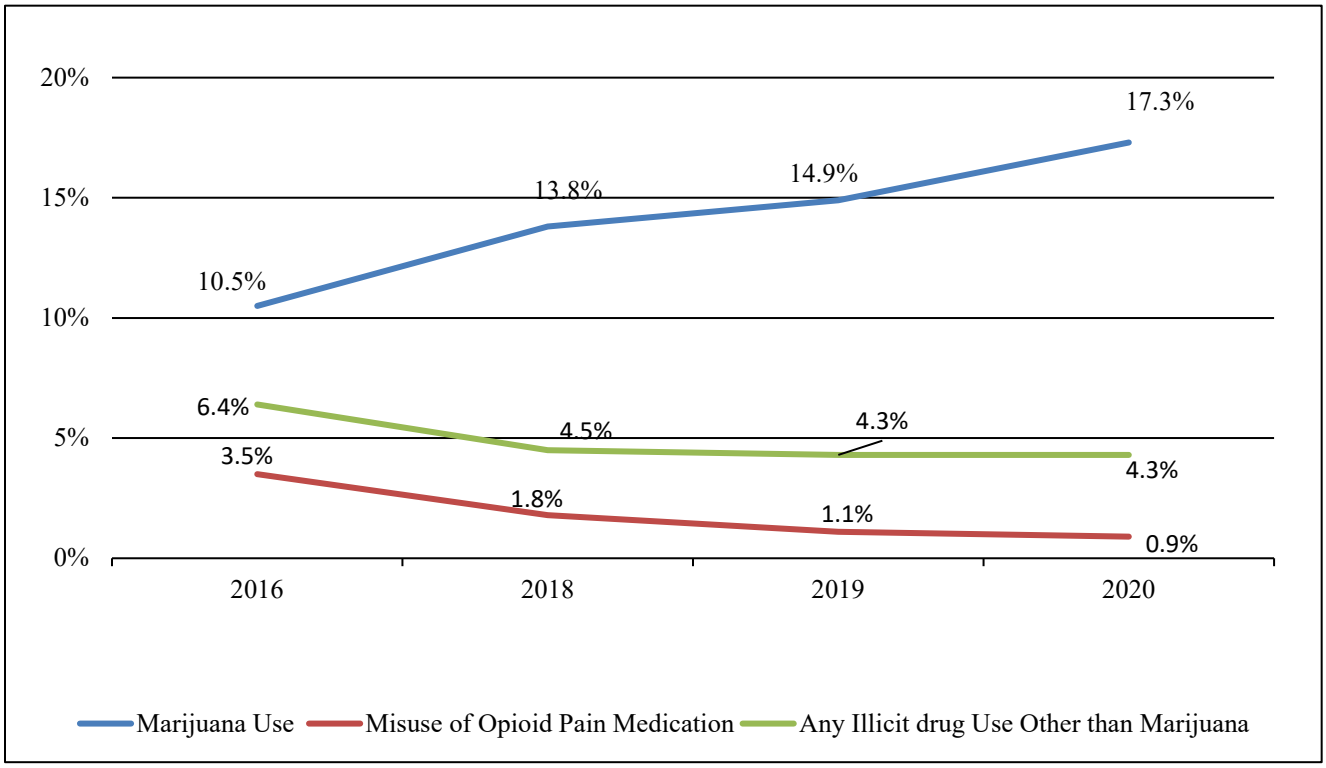
B2. Marijuana Use and Illicit Drug Use (Excluding Marijuana)

Trends in Recent Use (Figure 6-3)

As noted above, due to methodological changes, time trends in marijuana and other drug use, as well as substance abuse and dependence, compare rates of use and abuse/dependence for the survey years 2016 through 2020 only.

- Since 2016, past year marijuana use and illicit drug use (excluding marijuana) show distinct trajectories, with marijuana use increasing consistently each survey year and illicit drug use excluding marijuana declining.
- Thus, between 2016 and 2020, past year marijuana use increased from 11% to 17%. In contrast, illicit drug use other than marijuana in the last 12 months decreased from 6% to 4%.
- There was a marked decrease in misuse of opioid pain medication during this period, which fell from 3.5% in 2016 to 0.9% in 2020.

Figure 6- 3: Use of Marijuana, Opioid Pain Medication and Any Illicit Drug excluding Marijuana in the Past 12 Months: New Jersey 2016-2020



Demographic Characteristics of Recent Marijuana Users (Table 6-2)

- Although females use marijuana at a lower rate overall than males, females experienced a sharper increase in use than males between 2016 and 2020. Thus, among males, marijuana use rose during these years from 15% to 21%. Among females, rates more than doubled, rising from 6% to 14%.

Table 6- 2: Past 12 Month Use of Marijuana in New Jersey: 2016-2020

Demographics		**Used Marijuana in Past 12 Months (%)**			
		2016	2018	2019	2020
Gender	Male	15.0	15.7	16.7	20.7
	Females	6.2	12.1	13.5	14.2
Age	18-25	28.5	25.1	35.3	34.8
	26-34	23.1	22.0	26.3	35.1
	35-49	7.5	16.6	16.0	17.8
	50+	3.0	7.7	7.3	9.2
Race/Ethnicity	White	12.5	14.7	16.1	16.0
	Black	9.6	13.3	15.6	13.9
	Hispanic	3.9	10.6	15.0	20.5

- Rates of past-year marijuana use also increased between 2016 and 2020 in all age groups, with rates of use more than tripling among those aged 50 and older. During these years, rates of use rose from 29% to 35% among 18–25-year-olds, from 23% to 35% among 26–34-year-olds, from 8% to 18% among 35–49-year-olds, and from 3% to 9% among those 50 and older.

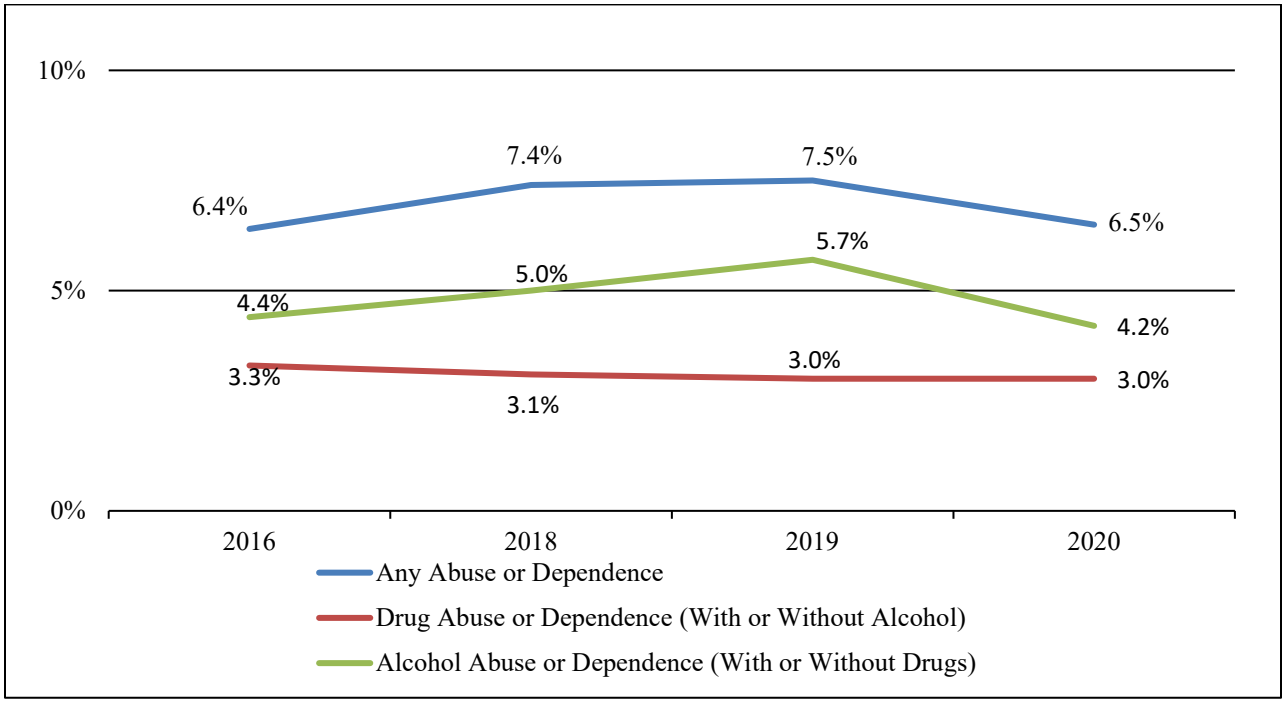
- Although increases in marijuana use occurred among all racial/ethnic groups between 2016 and 2020, rates of increase were most pronounced among Hispanics, who saw a fivefold rise from 4% to 21% during these years. In contrast, among Whites, past year marijuana use rose from 13% in 2016 to 16% in 2020 and among African Americans, from 10% to 14%.

B3. Substance Abuse and Dependence: Trends Overall and by Substance Type

Trends in Prevalence of Abuse/Dependence (Figure 6-4)

- Despite a 1% increase in rates of substance abuse/dependence from 2016 to 2019 (from 6.4% to 7.5%), the rate of abuse/dependence in 2020 (6.5%) decreased to a rate similar to that observed in 2016.

Figure 6- 4: Trends in Substance Abuse and Dependence: New Jersey 2016-2020



- Rates of abuse/dependence on drugs remained consistent across the 4 survey years, ranging from 3.0% to 3.3%.

- Rates of abuse/dependence on alcohol increased from 4.4% in 2016 to 5.7% in 2019 before decreasing to 4.2% in 2020.

Trends in Abuse/Dependence by Demographic Characteristics (Table 6-3)

Below are trends in estimates of abuse/dependence on alcohol and/or drugs from 2016-2020 by demographic characteristics. It should be kept in mind, however, that because the 2016 survey was smaller than the current or previous surveys, statewide estimates of abuse/dependence are not as reliable as those produced by surveys with a larger sample size. While the statewide margin of error for the 2016 survey is ± 3.0 percentage points, the margin of error for the 2018 survey is ± 2.3, for 2019, ± 2.7 and 2020, ± 3.5. These margins of error, moreover, increase as estimates are calculated for smaller subpopulations. Therefore, caution should be taken when interpreting changes in the prevalence of abuse/dependence for specific subpopulations, since the magnitude of the change often falls well within the margins of error for each survey.

- The rate of abuse/dependence in men remained approximately the same from 2016 to 2020 at around 10%. The rate among women, however, doubled from 2.7% to 5.4% in 2019 before decreasing to 3.6% in 2020.

- The youngest age group, 18-25, saw a large increase in abuse/dependence between 2016 and 2019, with rates rising from 9.7% to 17.2%. However, the rate of abuse/dependence in this age group dropped to 10.1% in 2020. Those aged 26-34, saw a large reduction in abuse dependence across all survey years, with rates decreasing by half, from 17.7% in 2016 to 9.4% in 2020. Among those aged 35-49, rates of abuse dependence fluctuated somewhat across survey years, with the 2020 rate (5.5%) being comparable to that found in 2016 (5.0%). Rates of abuse/dependence in adults aged 50 and above, however, steadily increased across survey years, from 3.2% in 2016 to 5.5% in 2020.

- Rates of abuse/dependence remained the same among White residents between 2016 and 2019 (between 7.3%-7.9%) before dropping to 5.7% in 2020.

- Among African American residents, rates of abuse/dependence increased steadily between 2016 to 2020, tripling from 3.0% to 9.5%. Hispanic residents also showed an increase from 2016 to 2019 (4.4% to 10.4%) before dropping to 5.1% in 2020.

Table 6- 3: Proportion of New Jersey Population Screening Positive for Substance Abuse or Dependence: New Jersey 2016-2020

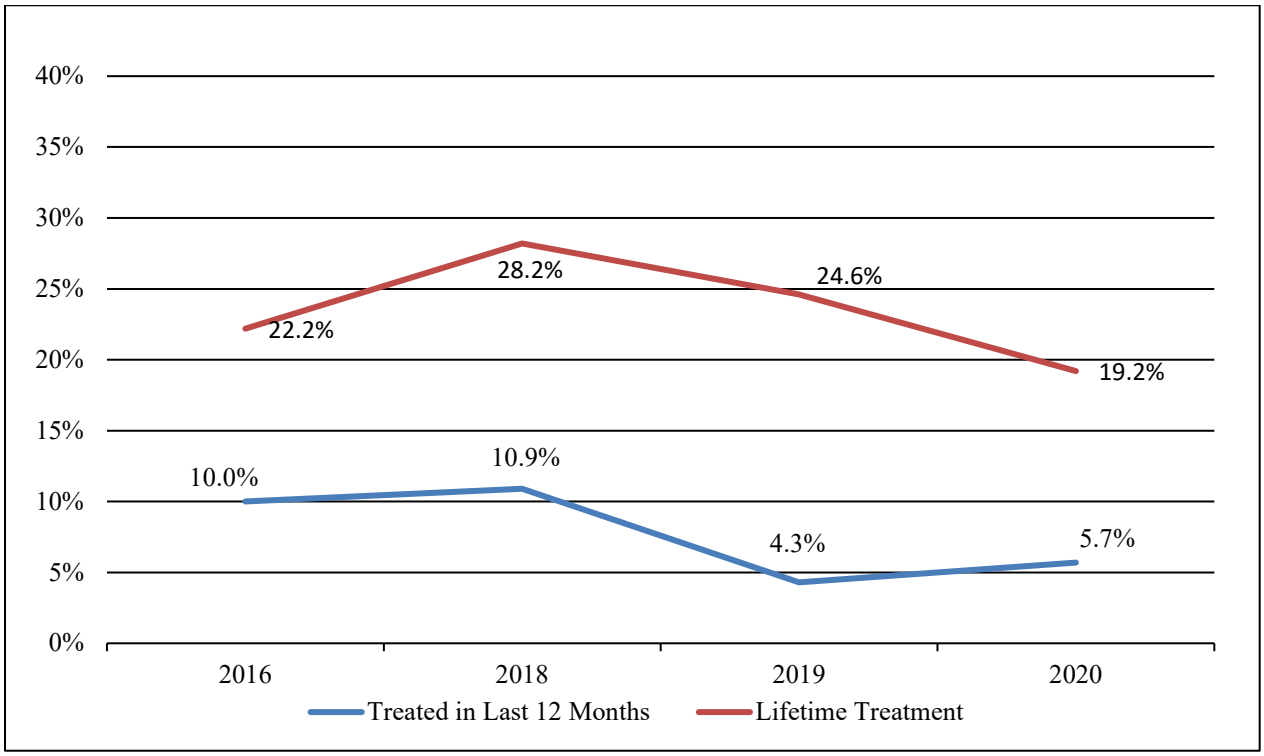
Demographics		Proportion with Positive Screen 2016 (n=1052) (%)	Proportion with Positive Screen 2018 (n=3100) (%)	Proportion with Positive Screen 2019 (n=2423) (%)	Proportion with Positive Screen 2020 (n=1622) (%)
New Jersey Total Population		***6.4***	***7.4***	***7.5***	***6.5***
Gender	Males	10.5	9.7	9.6	10.0
	Females	2.7	5.1	5.4	3.6
Age	18-25	9.7	12.2	17.2	10.1
	26-34	17.7	12.7	12.1	9.4
	35-49	5.0	8.3	4.9	5.5
	50+	3.2	4.4	5.4	5.5
Race/Ethnicity	White	7.9	7.9	7.3	5.7
	Black	3.0	7.3	7.9	9.5
	Hispanic	4.4	6.4	10.4	5.1

B4. Substance Abuse Treatment (Figure 6-5)

This section examines trends in lifetime access to treatment since 2016 among New Jersey residents with symptoms of substance abuse or dependence. As previously noted, varying sample sizes across survey years result in different margins of error, which should be taken into account when interpreting these findings.

- Since 2016, the proportion of residents with symptoms of substance abuse or dependence who received addiction treatment has declined.
- The percent treated in the last 12 months showed the most consistent decrease, falling from 10% -11% in 2016 and 2018, respectively, to 4.3% and 5.7% in 2019 and 2020, respectively.
- Lifetime treatment rates fluctuated between 22% and 28% in 2016 and 2018, respectively, and then fell to 25% in 2019 and 19% in 2020.

Figure 6- 5: Receipt of Formal Substance Abuse Treatment in Lifetime and Last 12 Months: Adults with Symptoms of Abuse or Dependence



C. NEW JERSEY AND THE NATION (2018-2019)

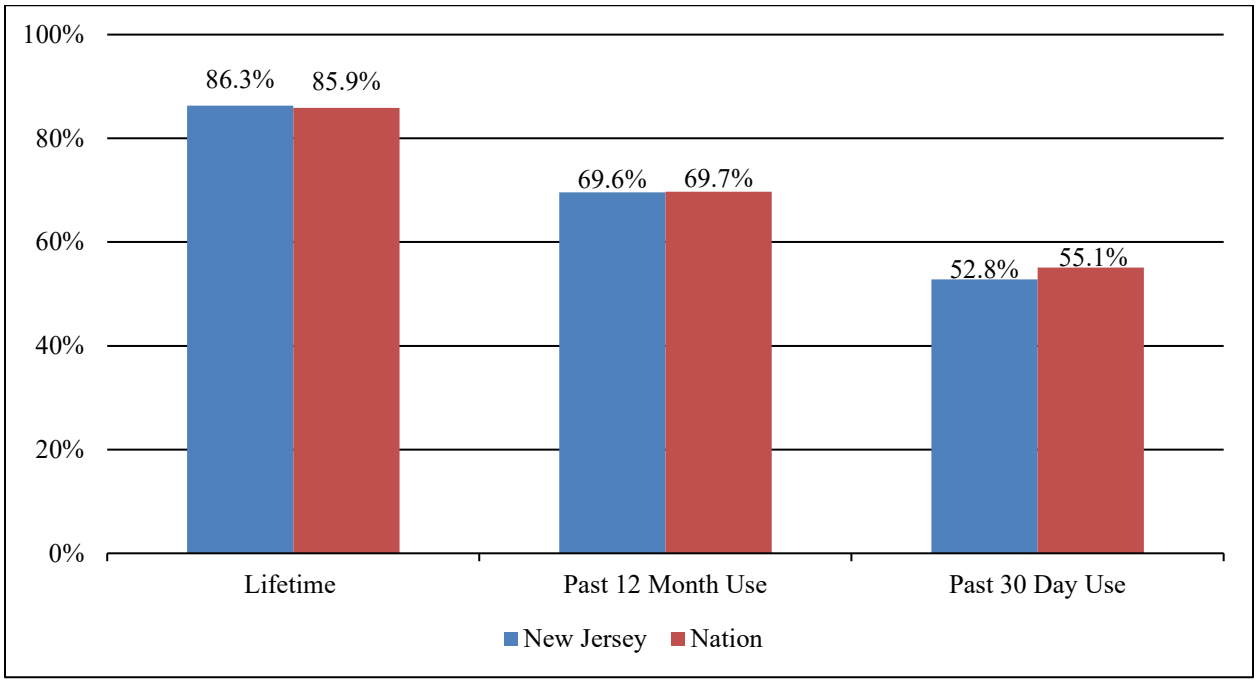
This section compares New Jersey to national estimates of alcohol and drug use obtained from the 2019 National Survey on Drug Use and Health. The estimates presented are based on combined data from 2018-2019 and include comparisons for alcohol use, illicit drug use (including marijuana), and substance abuse and dependence. Comparisons do not include 2020 data because, at the time of this report, SAMHSA had not yet released data from the 2020 national survey. All comparisons are made for adults aged 18 and older.

C1. Alcohol Use

Prevalence of Use (Figure 6-6)

- New Jersey residents reported drinking rates comparable to their national counterparts for lifetime use (86% for each group), past 12 months use (70% for each group) and use in the past 30 days (53% vs. 55%, respectively).

Figure 6- 6: Use of Alcohol in Lifetime, Last 12 Months and Last 30 Days: New Jersey and the Nation (2018 & 2019 Combined)



Demographic Characteristics of Alcohol Users (Table 6-4)

- By gender, the rate of past 30-day alcohol use by New Jersey men was comparable to the past-30 day use rate by men nationally (59% for each group). New Jersey women drank alcohol in the last 30 days at a slightly lower rate than women nationally (48% vs. 51%).

- Young New Jersey residents aged 18-25, were much less likely to drink in the past 30 days (47%) than those in the same age group nationally (55%). Among those aged 26 and above, however, rates of past 30-day drinking in New Jersey were comparable to national rates (54% in New Jersey and 55% in the nation).

- Whites in New Jersey were just as likely as Whites in the nation to drink in the past 30 days (60% for both groups); however past 30-day drinking was lower in New Jersey among African Americans (40% vs. 47%), and Hispanics (44% vs. 47%). Asians in New Jersey were more likely to drink in the past 30 days than their national counterparts (46% vs. 42%).

- By education status, New Jersey residents showed lower rates of past 30-day alcohol use than their national counterparts at all education levels, including those with less than a high school education (31% vs. 34%), high school graduates (42% vs. 46%), those with some college (53% vs. 58%) and college graduates (65% vs. 67%).

Table 6- 4: Past 30-Day Use of Alcohol by Demographic Characteristics: New Jersey and the Nation (2018 & 2019 Combined)

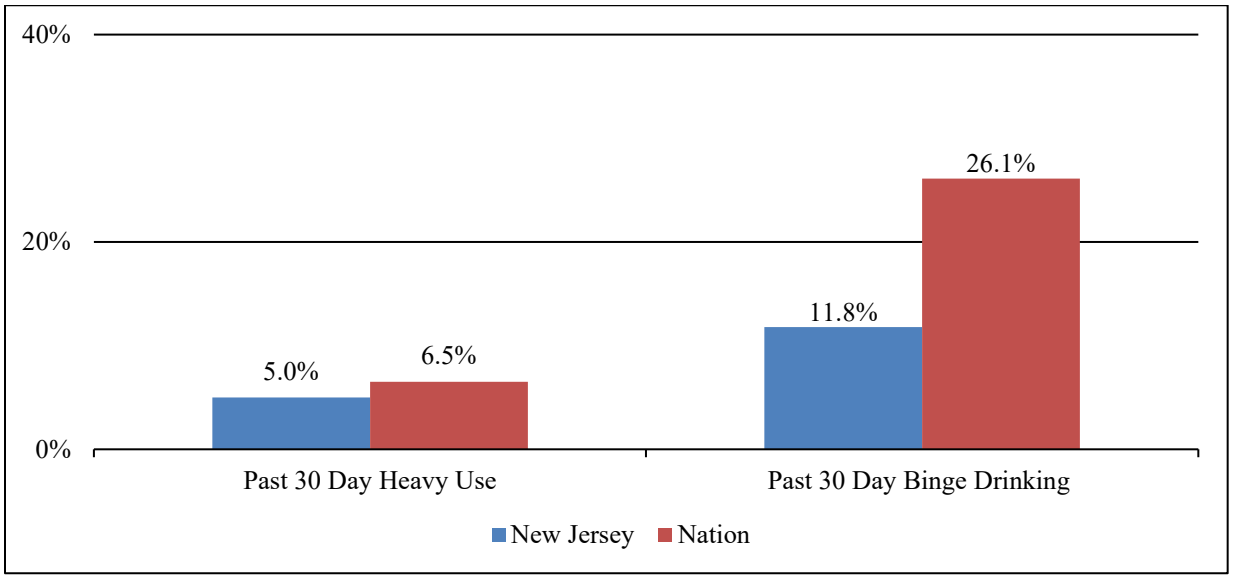
Demographics		New Jersey	Nation
TOTAL		*52.8%*	*55.1%*
Gender	Male	58.5	59.2
	Females	47.8	51.2
Age	18-25	46.7	54.7
	26+	53.9	55.1
Race/Ethnicity	White	59.5	60.1
	Black	39.5	47.1
	Hispanic	44.4	47.3
	Asian	45.8	41.7
Education	Less than H.S.	30.9	33.7
	H.S. Grad.	41.9	45.6
	Some College	52.9	58.3
	College Grad.	65.1	67.3

Binge Drinking and Heavy Alcohol Use: Prevalence Overall (Figure 6-7)

- New Jersey residents were slightly less likely to report heavy drinking than their national counterparts, with 5% of New Jersey residents and 7% of adults nationally reporting heavy drinking in the past 30 days.

- New Jersey residents were less than half as likely to report binge drinking as their national counterparts, however, with 12 % of New Jersey residents and 26% of adults nationally binge drinking in the last 30 days.

Figure 6- 7: Binge and Heavy Drinking in the Past 30 Days: New Jersey and the Nation (2018 & 2019 Combined)



Heavy Alcohol Use and Binge Drinking: Prevalence by Age (Table 6-5)

- New Jersey residents aged 18-25 had rates of heavy drinking similar to rates in their national counterparts (8% and 9%, respectively) but were substantially less likely than their national counterparts to have binge drank in the last month (19% vs. 35%).
- Among those aged 26 and older, New Jersey and the nation had comparable rates of heavy drinking (5% vs. 6%, respectively) but less than half the rate of binge drinking (11% vs. 25%).

Table 6- 5: Binge and Heavy Drinking in the Past 30 Days by Age: New Jersey and the Nation (2018 & 2019 Combined)

	18-25		26+	
	New Jersey	Nation	New Jersey	Nation
Heavy Drinking	8.0	8.7	4.5	6.1
Binge Drinking	18.9	34.6	10.8	24.8

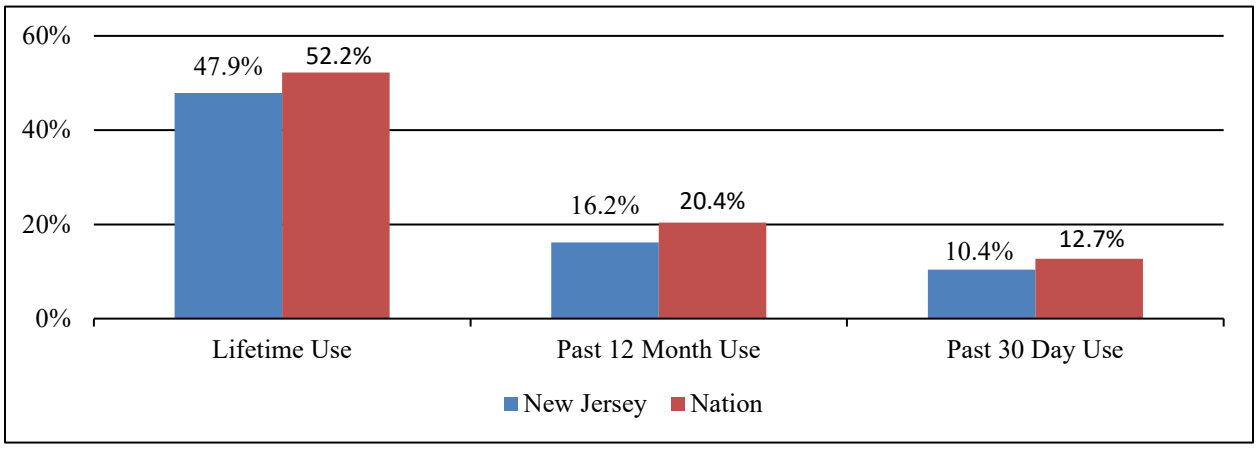
C2. Illicit Drug Use

We include marijuana as an illicit drug, which is consistent with definitions used in the NSDUH, for all national comparisons regarding illicit drug use.

Prevalence of Illicit Drug Use (Figure 6-8)

- New Jersey residents reported lower rates of illicit drug use in their lifetimes than Americans nationwide (48% vs. 52%), and slightly lower rates of past year (16% vs. 20%) and past 30-day use (10% vs. 13%).

Figure 6- 8: Use of Illicit Drugs in Lifetime, Last 12 Months and Last 30 Days: New Jersey and the Nation (2018 & 2019 Combined)



Demographic Characteristics of Illicit Drug Users (Table 6-6)

- Both men and women in New Jersey were less likely to have used illicit drugs in the past 12 months than their national counterparts (19% vs. 24% for men, and 14% vs. 18% for women).

- Both younger and older New Jersey residents were substantially less likely than their national counterparts to have used illicit drugs in the past year, including 31% vs. 30% of those 18-25, and 31% vs. 39% of those 26 and older.

- Past year illicit drug use was also lower among all New Jersey racial/ethnic groups than their national counterparts, including Whites (18% vs. 21%), African Americans (16% vs. 22%), Hispanics (14% vs. 18%), and Asians (8% vs. 11%).

- New Jersey residents also had lower rates of drug use than the nation as a whole at all educational levels, including those with less than a high school education (12% vs. 18%), high school graduates (16% vs. 20%), those with some college education (21% vs. 24%), and college graduates (15% vs. 18%).

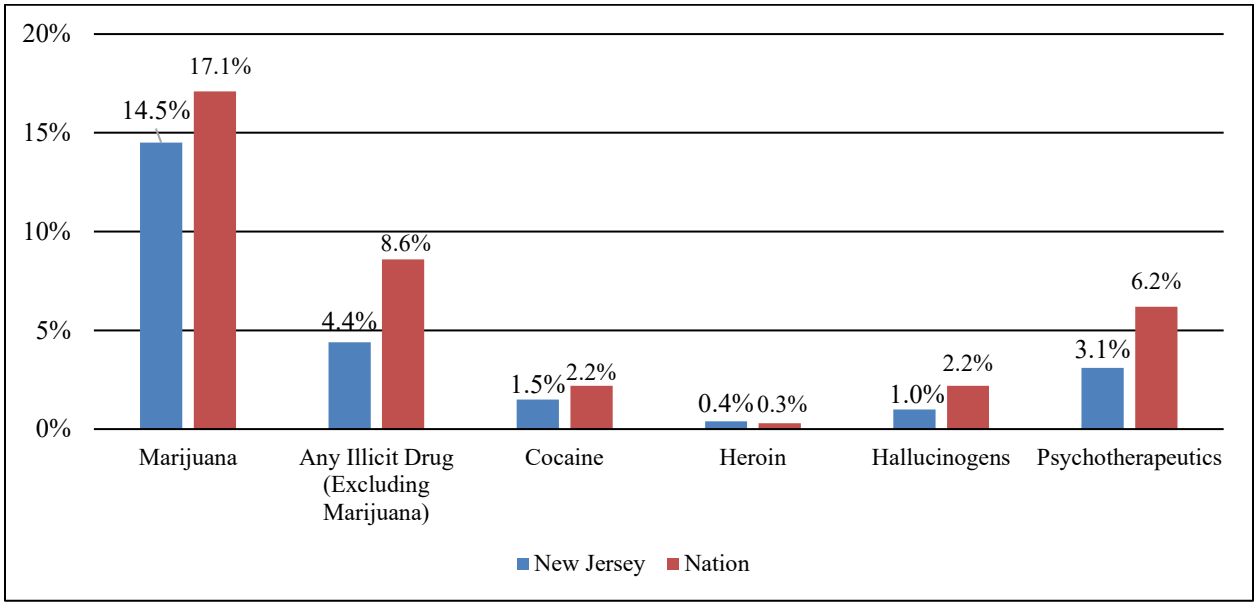
Table 6- 6: Past 12 Month Use of Illicit Drugs among Residents Aged 18 and Older by Demographic Characteristics: New Jersey and the Nation (2018 & 2019 Combined)

Demographics		New Jersey	Nation
TOTAL		*16.2%*	*20.4%*
Gender	Male	18.6	23.6
	Females	14.0	17.5
Age	18-25	31.4	38.9
	26+	14.1	17.5
Race/Ethnicity	White	17.6	21.3
	Black	16.2	21.8
	Hispanic	13.8	18.1
	Asian	8.4	10.9
Education	Less than H.S.	12.4	18.2
	H.S. Grad.	15.6	19.8
	Some College	20.6	24.1
	College Grad.	14.7	18.2

Types of Illicit Drugs Used (Figure 6-9)

- New Jersey had slightly lower or equivalent rates of use for each type of drug in the past year as the nation as a whole, including marijuana (14.5% vs. 17.1%), cocaine (1.2% vs. 2.2%), hallucinogens (1.0% vs. 2.2%) and psychotherapeutics (3.1% vs. 6.2%). Heroin was used by less than 0.5% of residents in both New Jersey and the nation.

Figure 6- 9: Use of Specific Illicit Drugs in the Past 12 Months: New Jersey and the Nation (2018 & 2019 Combined)



Demographic Characteristics of Illicit Drug Users (Table 6-7)

- By age, patterns of illicit drug use in New Jersey are consistent with national trends, with rates of use of all types of illicit drugs being higher among those aged 18 to 25 than among those 26 and older.
- However, with the exception of psychotherapeutics, rates of use for each drug type in New Jersey residents were lower than, or comparable to, national rates, in both age groups. This discrepancy was most notable for marijuana use among 18–25-year-olds (29% vs. 35%).
- Heroin was used by less than 1% of individuals in New Jersey and the nation in both age groups, and psychotherapeutics by about 3% of individuals aged 26+ both nationally and in New Jersey.
- However, New Jersey residents aged 18-25 had slightly higher rates of psychotherapeutic use than their national counterparts (7% vs. 5%).

Table 6- 7: Illicit Drugs Used in Past 12 Months by Age: New Jersey and the Nation (2018 & 2019 Combined)

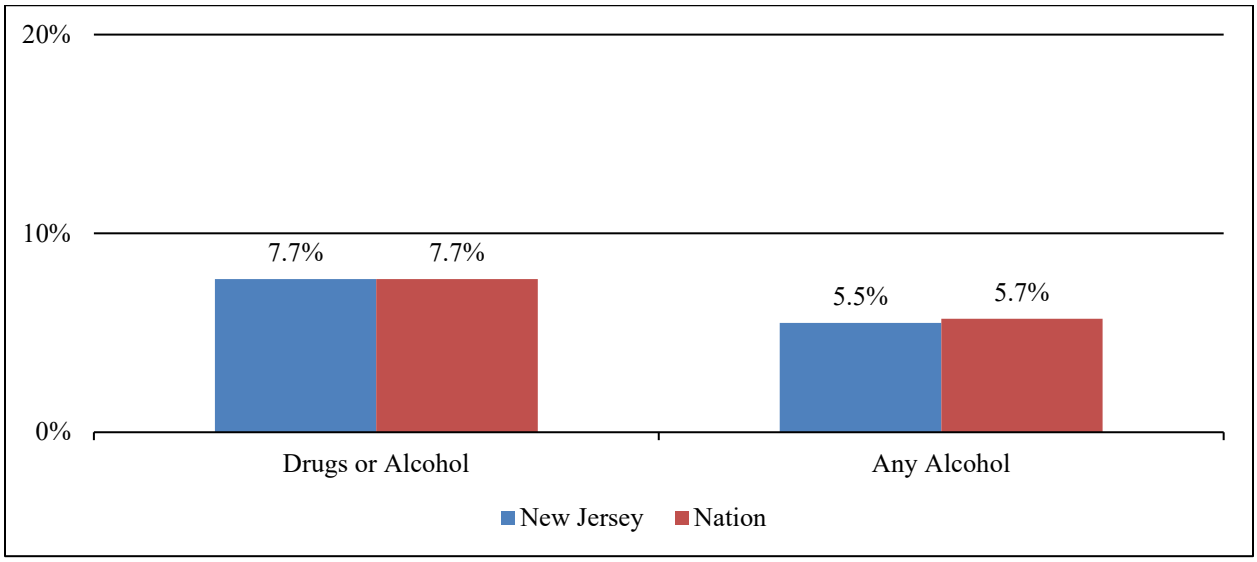
	18-25		26+	
	New Jersey	Nation	New Jersey	Nation
Marijuana	29.0	35.1	12.5	14.3
Cocaine (includes use of crack)	5.1	5.5	1.0	1.6
Heroin	0.3	0.4	0.4	0.3
Hallucinogens	3.0	7.0	0.7	1.4
Psychotherapeutics	6.6	5.3	2.6	3.4

C3. Substance Abuse and Dependence

Prevalence of Abuse/Dependence (Figure 6-10)

- Rates of abuse or dependence on drugs or alcohol were comparable in New Jersey and the nation, with 7.7% of statewide and national residents meeting criteria for abuse or dependence on drugs and/or alcohol and 5.5% and 5.7%, respectively, meeting criteria for abuse and/or dependence on the use of any alcohol, with or without concurrent drug use.

Figure 6- 10: Past Year Abuse of, or Dependence on, Drugs or Alcohol: New Jersey and the Nation (2018 & 2019 Combined)



Demographic Characteristics of Those with Abuse/Dependence (Table 6-8)

- By gender, rates of abuse/dependence in New Jersey were comparable to national rates, with males having higher rates than females in the state and in the nation as a whole (10.0% and 10.1%, respectively, for males, and 5.5% and 5.6%, respectively, for females).

- In both New Jersey and the nation, 18–25-year-olds had higher rates of abuse/dependence (14.0% and 14.6%, respectively) than those aged 26 and older (6.8% and 6.7%, respectively).

- There were few racial/ethnic differences in rates of abuse/dependence either nationally or in New Jersey. Further, New Jersey rates of abuse/dependence were comparable to national rates within each racial/ethnic group.

- Thus, 8.1% of Whites both in New Jersey and the nation screened positive for abuse/dependence. Similarly, positive screens were found in 7.6% of African Americans in New Jersey and 7.3% nationally, 8.1% of New Jersey Hispanics and 7.3% nationally and in 3.8% and 4.8% of Asians in New Jersey and the nation, respectively.

Table 6- 8: Past Year Drug or Alcohol Abuse or Dependence among Residents 18 and Older by Demographic Characteristics: New Jersey and the Nation (2018 & 2019 Combined)

Demographics		New Jersey	Nation
TOTAL		*7.7%*	*7.7%*
Gender	Male	10.0	10.1
	Female	5.5	5.6
Age	18-25	14.0	14.6
	26+	6.8	6.7
Race/Ethnicity	White	8.1	8.1
	Black	7.6	7.3
	Hispanic	8.1	7.3
	Asian	3.8	4.8
Education	Less than H.S.	6.2	7.7
	H.S. Grad.	7.7	7.8
	Some College	9.5	8.8
	College Grad.	6.9	6.7

- Rates of abuse or dependence in New Jersey were comparable to those of the nation among residents who graduated high school (7.7% and 7.8%, respectively), completed some college (8.8% and 9.5%%, respectively) or were college graduates (8.8% vs. 9.5%, respectively).

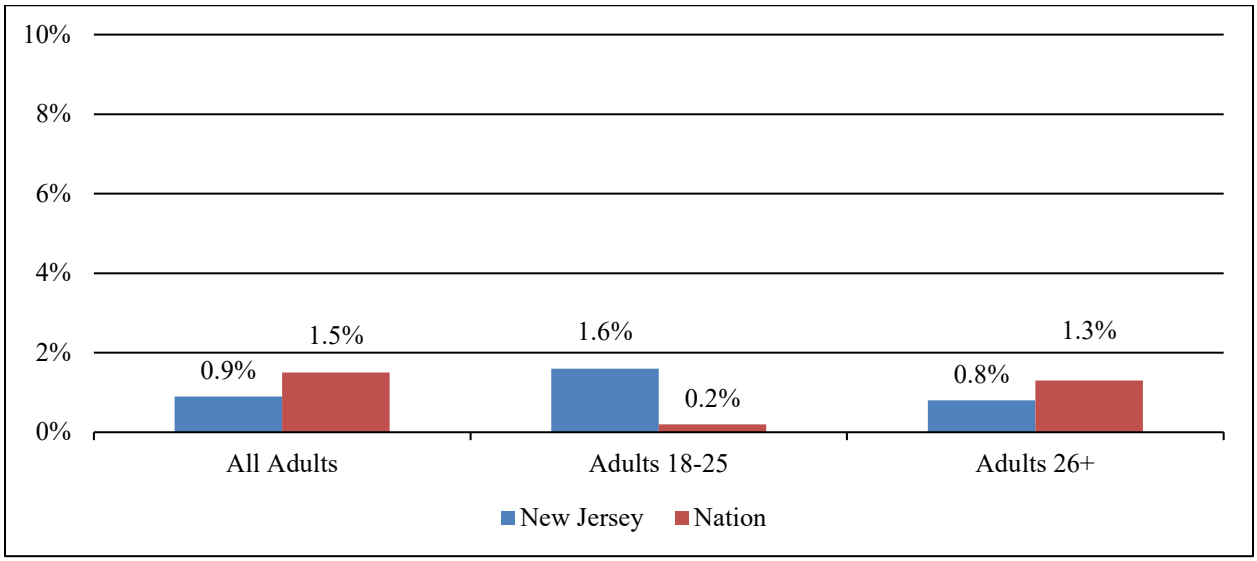
- New Jersey residents with less than a high school education, however, were somewhat less likely to screen positive for abuse or dependence than their national counterparts (6.2% vs. 7.7%),

C4. Substance Abuse Treatment Access (Figure 6-11)

- Rates of substance abuse treatment were somewhat higher nationally than they were in New Jersey for residents as a whole. Thus, 0.9% of New Jersey adults and 1.5% of all adults nationally received substance abuse treatment in the past 12 months.

- By age, New Jersey residents between the ages of 18-25 were more likely than their national counterparts to have been treated in the last 12 months (1.6% vs. 0.2%). Among those aged 26 and older, however, past-year national treatment rates were somewhat higher than those in New Jersey (1.3% vs. 0.8%).

Figure 6-11: Residents who Received Substance Abuse Treatment in the Past 12 Months: New Jersey and the Nation (2018 & 2019 Combined)



CHAPTER 7

CONCLUDING REMARKS

The 2018-2020 NJ Household Survey contained findings that have important implications for public policy, including notable trends in substance abuse and mental health, specific sub-populations at special risk and disparities in access to treatment. These are discussed in greater detail below.

A. TRENDS IN SUBSTANCE USE AND MENTAL HEALTH

Substance Abuse

New Jersey and other states are currently in the midst of a deadly national opioid epidemic, and most state and national efforts are focused on addressing this national crisis. The full extent of this epidemic, however, is not adequately reflected in the results of the present survey due to the limitations of household surveys in reaching opioid users by telephone and obtaining truthful responses.

This report does, however, provide trends in the misuse of opioid pain medication since 2016 as well as more detailed information on marijuana use, which has received increasing public acceptance as state-based efforts at legalization continue to expand. The 2018 portion of the survey also provides information on trends in nicotine and e-cigarette use, which remain a continuing concern, especially for their effects on young people in New Jersey.

Marijuana

Since the Compassionate Use Medical Marijuana Act was signed into law in 2010, New Jersey has developed a statewide medical marijuana program (MMP) that allows patients with qualifying medical conditions to obtain medicinal marijuana in a timely, safe and responsible manner. As of December 2021, the New Jersey MMP licensed 23 cannabis dispensaries, or Alternative Treatment Centers (ATC), throughout the state and included more than1,000 licensed physicians serving over 100,00 patients. Further, in 2021 New Jersey became the fourteenth state to legalize marijuana for recreational use, allowing for the legal sale and use of up to 6 ounces of cannabis and cannabis products for residents 21 years and older. While it is currently legal to consume marijuana recreationally in New Jersey, however, a statewide system of recreational use dispensaries has yet to be established.

One concern of policymakers in legalizing marijuana for medical and recreational purposes is that increasing the drug's availability may have unintended consequences, such as diversion to those who are underage, increases in impaired driving and promotion of more dangerous illicit drug use (Thurstone, 2011; Pearlson et al., 2021). Methodological changes to the survey

described earlier in this report prevented our ability to track changes in marijuana use before 2016 to determine if policy changes surrounding legalization were reflected in changing patterns of use. Trends in use since 2016, however, showed a 55% increase in rates of marijuana use, with the proportion of residents reporting past-year use rising from 11% in 2016 to 17% in 2020. During this time, however, there was no corresponding increase in the use of other illicit substances, with rates of past-year use of illicit drugs other than marijuana declining somewhat, from 6% to 4%.

Another concern expressed by policymakers is that legalized use will contribute to increases in impaired driving and marijuana-related vehicular accidents. To date, we are unaware of any systematic studies tracking rates of impaired driving relative to marijuana legalization in New Jersey. However, the current data show that users of marijuana drive under the influence of the drug in about the same proportion as alcohol users drive under the effects of alcohol (21% and 23%, respectively). Despite similarities in impaired driving across substances, however, alcohol users were substantially more likely than users of marijuana to have been arrested for driving under the influence (17% vs. 2%). While this disparity in arrest rates may reflect substance-based differences in the severity of impaired driving, it may also reflect limitations in the current capacity of law enforcement to identify and prosecute drivers impaired by marijuana (NJ.COM, 2019).

Opioid Pain Medication

In 2017, New Jersey passed one of the strictest sets regulations pertaining to opioid-prescribing in the nation, limiting initial opioid prescriptions to a 5-day supply and permitting renewals up to only 25 days for patients still in pain (NJ Attorney General, 2017). Trends in the misuse of opioid medications in New Jersey indicate a substantial decrease in misuse following implementation of these regulations, with past 12-month opioid medication misuse falling from 3.5% in 2016 to under 1% in 2020. Moreover, the biggest decrease occurred between 2016 and 2018, immediately following passage of the new regulations, when rates of misuse dropped by more than half to 1.8%. While this decrease no doubt reflects the stricter limitations on opioid prescribing, the growth of the New Jersey MMP and increase in the use of medical cannabis for acute and chronic pain may have also contributed to the decline.

Cigarette Use

One positive finding in the current report was the continued downward trend in cigarette use between 1998 and 2018. Although smoking rates in residents aged 50 and older have remained stable (14% in 1998 vs. 13% in 2018), and generally lower than rates found in younger age groups, current smoking decreased substantially in all other age groups. Most notable were the declines in smoking among the youngest residents aged 18-25, with rates falling from 29% in 1998 to 9% in 2018.

E-Cigarettes

While the reduction in cigarette use, especially among young adults, is encouraging, trends in the use of e-cigarettes in the nation as a whole have not been equally positive. In recent years, the nation has witnessed an alarming rise in the use of e-cigarettes among youth and young adults, with e-cigarette use growing by 900% among high school students between 2011 and 2015 (US Department of Health and Human Services, 2016). Most e-cigarettes contain nicotine, which can cause addiction and harm the developing brain, which is more vulnerable to nicotine exposure than older adult brains. Further, e-cigarette liquids containing nicotine can also cause toxicity or death if the contents of refill cartridges or bottles containing nicotine are consumed (US Department of Health and Human Services, 2016).

In New Jersey, e-cigarette use by young adults in 2018 substantially exceeded the use of nicotine cigarettes, with e-cigarette use reported by 27% of those aged 18-20 and 33% of 21-25 year-olds. Further, while older adults primarily used e-cigarettes for health reasons and the desire to reduce or quit smoking tobacco cigarettes, many 18-20 year-olds cited non-health related reasons for use, such as aroma or taste. The widespread use of nicotine-containing e-cigarettes by young adults coupled with the corresponding decline in the use of regular cigarettes seems to suggest that young adults are substituting e-cigarettes for regular cigarettes and not, in fact, reducing nicotine consumption. While New Jersey currently bans e-cigarette sales to anyone under age 21, and has placed restrictions on flavored e-cigarettes, continuing to monitor usage among youth and young adults should remain a public health priority. Since aroma and taste represent an important reason for e-cigarette use among young adults, further restrictions on flavored devices may be helpful in reducing initiation of use by youth and young adults.

Mental Health and Co-Occurring Substance Abuse Disorders

Results of survey items measuring mental health status suggest that a sizeable portion of New Jersey residents suffer from mental health symptoms. Over 17% of residents screened positive for current symptoms of one or more of the three mental health conditions assessed, including 11% who screened positive for anxiety, 9% for depression and 8% for PTSD. While the screening assessments used in this survey were not equivalent to a professional psychiatric evaluation, the overall New Jersey survey estimate of 17% is nevertheless consistent with the 2016-2017 NSDUH estimates, obtained using different assessment techniques, that show 16.2% of New Jersey residents meet criteria for "any mental illness" [4] (Center for Behavioral Health Statistics and Quality, 2017).

[4] The NSDUH defines "any mental illness" as "having a diagnosable mental or behavioral or emotional disorder other than a developmental or substance abuse disorder as assessed by the Structured Clinical Interview for the Diagnostic and Statistical Manual of Mental Disorders (SCID)".

This survey also corroborated findings of numerous other studies which have demonstrated important links between mental health problems and substance use (Kessler et al., 1996). In the present study, residents reporting mental health symptoms were two to three times as likely as those without symptoms to use illicit drugs and smoke cigarettes. Not surprisingly, residents with mental health symptoms were also more likely to meet diagnostic criteria for substance abuse or dependence, with 20% of those having symptoms of at least one mental health condition screening positive for abuse/dependence compared to only 5% of those with no mental health symptoms. While there continues to be disagreement regarding the precise mechanisms underlying the frequent association of mental health and substance abuse disorders, most observers agree that self-medication of symptoms is an important contributing factor (Harris and Edlund, 2005).

New Jersey has been proactive in promoting integrated treatment for those with co-occurring mental health and substance abuse problems, and the state is highly ranked nationally in terms of access to mental health treatment (Mental Health America, 2016). As this report demonstrates, however, access to treatment nevertheless remains limited. The findings thus point to a continuing need to explore avenues for increasing treatment access, as well as the importance of promoting evidence-based community mental health prevention programs, early identification and intervention services and the further expansion of integrated treatment to better manage the dual problems of mental health and substance abuse. Additionally, ongoing statewide monitoring of mental health trends will help identify populations and regions at risk and insure the optimal availability and accessibility of mental health services for all in need.

Substance Abuse and Mental Health Disorders in Young Adults

Young adults under age 26 were found to be at substantially higher risk of mental health and substance abuse problems than other New Jersey populations studied. In addition to their high rates of e-cigarette use, they were substantially more likely than other age groups to vaporize marijuana, with 57% of 18-20 year-old lifetime marijuana users reporting vaping in 2018. Moreover, young people used illicit substances at more than twice the rate of New Jersey residents as a whole and had the highest rate of substance abuse or dependence of all age groups (17% vs. 7% statewide). Young adults were also disproportionately affected by mental health issues, with 23% of 18-25 year-olds screening positive for at least one disorder compared to 17% of the population as a whole. Because survey data on mental health symptoms was collected before the start of the COVID-19 pandemic, it is likely that the pandemic further fueled mental health problems in young adults, a group reported to be disproportionately affected by adverse pandemic-related mental health consequences (Forbes.com, 2021). The multiple mental and behavioral health challenges faced by young adults in New Jersey indicate a need to target this population for mental health and substance abuse early intervention and treatment efforts, with a

specific focus on colleges and other venues serving young adults.

B. TREATMENT ACCESS

Most individuals screening positive for substance abuse/dependence and/or mental health symptoms did not receive formal treatment in the last 12 months. Overall, however, mental health treatment was substantially more accessible to those with mental health symptoms than addiction treatment was to those with substance abuse problems. Thus, 42% of those with mental health symptoms had been treated in the past year, compared to only 10% of those with symptoms of substance abuse or dependence.[5]

Further, despite recent efforts to increase access to addiction treatment in response to the opioid epidemic, access to addiction treatment among those with symptoms of abuse or dependence actually declined somewhat over the past four years. Thus, among those with symptoms, overall rates of lifetime treatment declined slightly from 22% in 2016 to 19% in 2020 and past year treatment fell from 10% to 6%. In 2020, however, treatment access was clearly affected by the COVID-19 pandemic, which necessitated the temporary closure of many agencies and/or reductions in numbers of patients admitted.

Disparities in access to treatment among subpopulations of residents with addiction problems persisted in the present survey. As found in previous surveys, residents needing treatment for an alcohol-only problem were the least likely of all those with an addiction problem to be treated. Among those with alcohol problems only, 3% were treated in the last year compared to 15% of those with drug problems only and 11% of those with both drug and alcohol problems.

Lower access of those with alcohol-only problems has been noted in all previous New Jersey Household Surveys to date and may reflect, in part, lower perceptions of need among those who only abuse or are dependent on alcohol. In the present survey, the demand for treatment among those with alcohol only problems was 8%, markedly lower than the demand in those with drug problems only (26%) and those with both drug and alcohol problems (35%).

[5] The 42% with mental health treatment is based on data from 2018, the only year in which this information was collected. The 10% with substance abuse treatment is based on the average across all three survey years (2018-2020). Annual rates of substance abuse treatment between 2018-2020 were: 10.9% in 2018, 4.3% in 2019, 5.7% in 2020.

REFERENCES

Abuse, S. (2014). Mental Health Services Administration (2013) Results from the 2012 National Survey on Drug Use and Health: Summary of National Findings (No. NSDUH Series H-46, HHS Publication No.(SMA) 13–4795). Rockville, MD: Substance Abuse and Mental Health Services Administration.

Alegria, M., Canino, G. Rios, R., Vera, M. Calderon, J., Rusch, D., and Ortega, A. . (2002). Inequalities in Use of Specialty Mental Health Services Among Latinos, African Americans, and Non-Latino Whites. Psychiatric Services, 53(12), 1547-1555.

Aquilino, W. S. (1994). Interview mode effects in surveys of drug and alcohol use: A field experiment. Public Opinion Quarterly, 58(2), 210-240.

Aquilino, W. S., & LoSciuto, L. A. (1990). Interview mode effects in drug use surveys. Public Opinion Quarterly, 54, 362-395.

Association, A. P. (1994). Diagnostic and statistical manual (DSM-IV). Washington, DC: American Psychiatric Association.

Belinfante, A. (2000). Telephone Penetration By Income By State (Data through 1999).

Blumberg, S. J., Ganesh, N., Luke, J. V., & Gonzales, G. (2013). Wireless substitution: state-level estimates from the National Health Interview Survey, 2012. National health statistics reports (70).

Blumberg, S.J., & Luke, J.V. (2019). Wireless substitution: state-level estimates from the National Health Interview Survey, 2017. National health statistics reports.

Blumberg, S. J., Luke, J. V., Davidson, G., Davern, M. E., Yu, T.-C., & Soderberg, K. (2009). Wireless substitution: state-level estimates from the National Health Interview Survey, January-December 2007: Citeseer.

Cameron, R. P., & Gusman, D. (2003). The primary care PTSD screen (PC-PTSD): development and operating characteristics. Primary Care Psychiatry, 9(1), 9-14.

Center for Behavioral Health Statistics and Quality. (2020). 2018 and 2019 National Survey on Drug Use and Health: Detailed Tables, Substance Abuse and Mental Health Services Administration, Rockville, MD.

Cohen, N. (2017). 8 charged after dozens sickened by synthetic marijuana, New Jersey. Retrieved from http://www.nj.com/essex/index.ssf/2017/05/8_charged_after_dozens_sickened_by_synthetic_marij.html

Frey, J. (1989). Survey research by telephone (2 ed.). Beverly Hills, CA: Newbury Park: Sage Publications.

Gfroerer, J. C., & Hughes, A. L. (1991). The feasibility of collecting drug abuse data by telephone. Public Health Reports, 106(4), 384.

Gonzalez, J., Alegria, M., and Prihoda, T. (2005). How do attitudes toward mental health treatment vary by age, gender, ethnicity/race in young adults? Journal of Community Psychology, 33(5), 611- 629.

Guion, P. (2019, March 3). *Driving while high on weed? Most NJ cops aren't trained to identify impairment.* NJ.com. https://www.nj.com/marijuana/2019/03/driving-while-high-on-weed-most-nj-cops-arent-trained-to-identify-impairment.html

Harris, K. M., & Edlund, M. J. (2005). Self-medication of mental health problems: New evidence from a national survey. Health Services Research, 40(1), 117-134.

Haseltine, W. (2021, April 13). *Young people hit hardest by loneliness and depression during COVID-19.* Forbes.com. https://www.forbes.com/sites/williamhaseltine/2021/04/13/young-people-hit-hardest-by-loneliness-and-depression-during-covid-19/?sh=230ea4425f0b

Johnson, T. P., Hougland, J. G., & Clayton, R. R. (1989). Obtaining reports of sensitive behavior: A comparison of substance-use reports from telephone and face-to-face interviews. Social Science Quarterly, 70(1), 174.

Kessler, R. C., Nelson, C. B., McGonagle, K. A., Edlund, M. J., Frank, R. G., & Leaf, P. J. (1996). The epidemiology of co-occurring addictive and mental disorders: implications for prevention and service utilization. American Journal of Orthopsychiatry, 66(1), 17.

Löwe, B., Wahl, I., Rose, M., Spitzer, C., Glaesmer, H., Wingenfeld, K., . . . Brähler, E. (2010). A 4-item measure of depression and anxiety: validation and standardization of the Patient Health Questionnaire-4 (PHQ-4) in the general population. Journal of affective disorders, 122(1), 86-95.

Mackenzie, C.S., Scott, T., Mather, A., & Sareen, J. (2008). Older adults' help-seeking attitudes and treatment beliefs concerning mental health problems. The American journal of geriatric psychiatry, 16(2), 1010-1019.

Marotta, J., Bahan, M., Reynolds, A., Vander, Linden, M., & Whyte, K. (2014). 2013 National Survey of Problem Gambling Services. Washington DC: National Council on Problem Gambling.

Mental Health America (2016) http://www.mentalhealthamerica.net/issues/2016-state-mental-health- america-ranking-states

Mulry-Liggan, M. H., & Chapman, D. W. (1982). The Design and Selection of a Sample for the Bureau of the Census Random Digit Dialing Experiment. Paper presented at the Proceedings of the American Statistical Association, Section on Survey Research Methods. Washington, DC: American Statistical Association.

Pattyn, E., Verhaeghe, M., & Bracke, P. (2015). The gender gap in mental health service use. Social psychiatry and psychiatric epidemiology, 50(7), 1089-1095.

Pearlson, G.D., Stevens, M.C., & D'Souza, D.C. (2021). Cannabis and driving. Frontiers in Psychology, 12:689444. Doi: 10.3389/fpsyt.2021.689444

Substance Abuse and Mental Health Services Administration. (2020). Key substance use and mental health indicators in the United States: Results from the 2019 National Survey on Drug Use and Health (HHS Publication No. PEP20-07-01-001, NSDUH Series H-55). Rockville, MD: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration. Retrieved from https://www.samhsa.gov/data/

Thurstone, C., Lieberman, S.A., & Schmiege, S.J. (2011). Medical marijuana diversion and associated problems in adolescent substance treatment. Drug and alcohol dependence, 118(2-3), 489-492.

National Institute on Drug Abuse. Synthetic Cannabinoid. Drug Facts. (2015), Retrieved from https://www.drugabuse.gov/publications/drugfacts/synthetic-cannabinoids

National Institute on Drug Abuse. Trends and Alerts (2016). Retrieved from https://www.drugabuse.gov/drugs-abuse/emerging-trends-alerts#spice.

Office of the Attorney General. (2017, May 3). *New Jersey Attorney General, Division of Consumer Affairs Unveil Online Information Hub to Help Health Care Practitioners and Patients Understand and Comply with State's New Opioid Prescribing Regulations.* The State of New Jersey, Department of Law & Public Safety. https://nj.gov/oag/newsreleases17/pr20170503a.html

U.S. Census Bureau (2020). Annual Estimates of the Resident Population for Selected Age Groups by Sex for New Jersey: April 1, 2010 to July 1, 2019. Retrieved from https://www.census.gov/quickfacts/NJ

U.S. Department of Health and Human Services. (2016). E-Cigarette Use Among Youth and Young Adults. A Report of the Surgeon General. Atlanta, GA. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health.

Welte, J.W., Wieczorek, W.F., Barnes, G.M. & Tidwell, M.C.O. (2006). Multiple risk factors for frequent and problem gambling: Individual, social, and ecological. Journal of Applied Social Psychology, 36(6), 1548-1568.