

THE 2016 NEW JERSEY HOUSEHOLD SURVEY ON DRUG USE AND HEALTH

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EXECUTIVE SUMMARY

PROJECT OVERVIEW

The 2016 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 trends, assess the mental health status of New Jersey residents and estimate the prevalence of co-occurring substance abuse and mental health disorders. The results of this survey are used by DMHAS to promote an integrated and rational approach to resource allocation for prevention, early intervention, treatment, and recovery support. The study was administered by the Department of Psychiatry, Robert Wood Johnson Medical School at Rutgers, the State University of New Jersey. A stratified random sample of 1,052 households was selected and adult members with the most recent birthdays were interviewed by telephone during March and April 2016.

Survey Highlights

Substance Use, Abuse and Treatment Access

- Overall, New Jersey residents used licit and illicit substances at a lower rate than their national counterparts. Compared to all Americans, they were less likely to use alcohol (50% vs. 56%) or smoke cigarettes (16% vs. 21%) in the last 30 days, and less likely to use illicit drugs in their lifetime (42% vs. 51%) or the last 12 months (12% vs. 18%).
- Marijuana was the most frequently reported drug of abuse by New Jersey residents with respect to both lifetime (41%) and past year (11%) use.
- About 13% of 18 to 20 year olds, and 47% of 18-20 year old marijuana users, had used the potentially harmful substance called synthetic marijuana, with 56% of users buying it from such outlets as convenience stores, gas stations and the internet.
- About 6% of New Jersey residents met DSM-IV diagnostic criteria for past-year abuse or dependence on alcohol or illicit drugs, with rates being especially high among frequent gamblers (20%) and young adults aged 26-34 (18%).
- Only 16% of residents with past-year abuse/dependence were treated in the past year and 38%, in their lifetime. Rates of past year treatment were especially low in those with alcohol problems only (3%).

Mental Health Symptoms, Co-occurring Disorders and Treatment Access

- Over 16% of residents screened positive for at least one mental health problem, including anxiety (11%), depression (7%) and post-traumatic stress disorder (PTSD) (7%).
- Mental health symptoms were highest among those with household incomes under \$25,000 (28%), the unemployed (27%) and the divorced or separated (26%).
- Those reporting mental health symptoms were at substantially increased risk of substance abuse/dependence. About 10% of those with PTSD symptoms vs. 3% of those with no mental health symptoms were positive for drug abuse/dependence and about 9% of those with depression vs. 4% of the symptom-free screened positive for alcohol abuse/dependence.
- Only 32% of residents with mental health symptoms were treated in the past year, with treatment being least accessible for young adults aged 18-25 (7%), African Americans (18%) and Hispanics (19%).

MAJOR FINDINGS

SUBSTANCE ABUSE AND DEPENDENCE

- **SUBSTANCE TYPE.** About 6% of the New Jersey population were found to meet diagnostic criteria¹ for abuse or dependence on illicit drugs² and/or alcohol and, as a result, were deemed to be in need of addiction treatment. Those needing treatment included 3% who abused or were dependent on alcohol only, 2% who abused or were dependent on drugs only and 1% who abused or were dependent on both alcohol and drugs.
- **GENDER.** Males (11%) were significantly more likely than females (3%) to abuse or be dependent on substances in the past year.
- **RACE/ETHNICITY.** Whites (8%) were substantially more likely to show symptoms of substance abuse or dependence in the past year than African Americans (3%), Hispanics (4%), or Asians (6%).
- **AGE.** Persons aged 26-34 had the highest overall prevalence of past-year abuse or dependence (18%), followed by those aged 18-25 (10%). Only 8% of those above age 34 met DSM-IV criteria for abuse or dependence.
- **REGION.** Residents of South Jersey were somewhat more likely than residents of North or Central Jersey to meet screening criteria for substance abuse or dependence (9% vs. 6% of residents in Central New Jersey and 5% of residents in Northern New Jersey).
- **NATIONAL COMPARISONS.** Rates of abuse or dependence on drugs or alcohol were lower in New Jersey than in the nation as a whole (6% vs. 8%).

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.

ALCOHOL: PATTERNS OF USE

- **PREVALENCE OF CONSUMPTION.** Most residents (85%) had at least one drink of alcohol in their life, including 66% who consumed alcohol in the past year and 50% who drank in the past 30 days.
- **FREQUENCY AND AMOUNTS.** Among residents who drank alcohol in the last 30 days, about 14% drank on more than 15 days of the last month. On days they drank in the last month, about 31% drank an average of 3 or more drinks and 9% averaged 5 or more drinks. About 9% of past month drinkers reported heavy drinking³ and about 1% reported binge drinking⁴ in the last 30 days.
- **GENDER, AGE AND RACE/ETHNICITY.** Alcohol consumption in the past 30 days was more common among men than women (58% vs. 43%) and among those aged 21 and over, with 49% to 60% of residents of drinking age reporting past-30 day drinking. Among 18 to 20 year olds, 24% drank alcohol in the last month. Whites were the most likely to report current drinking (60%) followed by African Americans (39%), Hispanics (34%) and Asians (29%).
- **AGE OF ONSET.** Approximately 78% of those who ever drank alcohol had their first drink before 21 years of age and 52% first drank alcohol by age 17 or earlier.
- **REGIONAL COMPARISONS.** There were few regional differences in the proportion of residents who drank alcohol in the last 30 days, with current drinking reported by 51% of those in North Jersey, 50% in Central Jersey and 49% in South Jersey.
- **NEW JERSEY TRENDS.** Alcohol use among New Jersey residents experienced a steady decline from 1998 to 2016 with regard to lifetime use (91% to 85%); past year use (75% to 66%); and use in the past 30 days (59% to 50%).
- **NATIONAL COMPARISONS.** New Jersey residents were less likely than their national counterparts to have drunk alcohol in the past 12 months (66% vs. 70%) and in the past 30 days (50% vs. 56%). New Jersey residents were also less likely than Americans as a whole to report heavy drinking in the past 30 days (5% vs. 7%).

³ Five or more drinks (males) or four or more drinks (females) on the same day on at least 4 days in the past 30 days.

⁴ Drinking for two or more days straight without sobering up

ILLICIT DRUGS: PATTERNS OF USE

- **OVERALL PREVALENCE.** Approximately 42% of New Jersey residents reported using one or more illicit drugs in their lifetime. Twelve percent of residents reported use of one or more illicit drugs in the last 12 months, and 9%, in the last 30 days.
- **PREVALENCE BY DRUG TYPE.** The four most frequently reported drugs with respect to lifetime use were marijuana (41%), cocaine (16%), psychotherapeutic drug misuse⁵ (13%) and hallucinogens⁶ (12%). Club drugs were used by 8% of residents and methamphetamine and heroin by 5% or fewer. Drugs most frequently used in the past 12 months and 30 days included marijuana (11% and 8%, respectively) and psychotherapeutics (5% and 3%, respectively). Past year and 30-day use of all other drugs was reported by 2% or fewer of all residents.
- **PSYCHOTHERAPEUTIC MISUSE.** New Jersey adults reported lifetime use of such drugs for non-medical purposes as follows: a) non-heroin opiates or pain medications, like Oxycontin or Percocet (9%), b) tranquilizers (9%), c) stimulants (7%) and d) sedatives (3%).
- **SYNTHETIC MARIJUANA.** More than 13% of all 18-20 year olds in New Jersey, and 47% of 18-20 year old marijuana users, reported lifetime use of synthetic marijuana, which consists of man-made chemicals having more unpredictable and damaging effects than natural marijuana. While 44% of users obtained the drug from family and friends, more than 56% purchased it legally from such places as convenience stores, gas stations and internet or mail order outlets.
- **GENDER AND RACE/ETHNICITY.** Men were more likely to report use of illicit drugs than women, both with respect to lifetime (52% vs. 34%) and past 12-month (18% vs. 7%) use. White residents had higher rates of lifetime (51%) and past 12-month (15%) use than African Americans (40% and 10%, respectively) and Hispanics (22% and 7%, respectively).
- **AGE.** The youngest age group of residents, aged 18 to 20, showed the lowest prevalence of lifetime illicit drug use (29%) and those aged 26 to 34, the highest (50%). Residents

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.

⁶ LSD, PCP, ecstasy, other club drugs

under age 26, however, had the highest prevalence of past 12-month use, including 33% of 21 to 25 year-olds and 27% of 18 to 20 year-olds.

- **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 57% of lifetime marijuana users initiated use before age 18, compared to 33% of psychotherapeutic users and 24% of cocaine users.
- **POLY-DRUG USE.** Among all New Jersey residents, approximately 21% have used multiple drugs in their lifetime and 5% have used multiple drugs in the last 12 months. Most frequently reported drugs used by multiple users in the last 12 months were marijuana (89%) and psychotherapeutic drugs (81%).
- **REGIONAL COMPARISONS.** Residents of South and Central Jersey had somewhat higher overall rates of past-year illicit drug use (14% and 13%, respectively) than residents of North Jersey (10%). Central and South Jersey residents were also somewhat more likely to have used multiple drugs in the past year (7% and 6%, respectively) than North Jersey residents (3%).
- **NATIONAL COMPARISONS.** New Jersey residents reported lower lifetime (42% vs. 51%) and past year (12% vs. 18%) illicit drug use rates than Americans nationwide, although past 30-day illicit drug use rates were comparable (9% for New Jersey vs. 10% for the nation). The two drugs most frequently used in the past year by New Jersey residents and Americans as a whole were marijuana (11% and 14%, respectively) and psychotherapeutics (5% and 7%). In both New Jersey and the nation, those aged 18 to 25 were more likely to report past-year illicit drug use than those 26 and older.

MENTAL HEALTH AND CO-OCCURRING DISORDERS

- **PREVALENCE.** Approximately 16% of New Jersey residents screened positive for at least one mental health problem, including 11% who were positive for anxiety, and 7% each who were positive for depression and PTSD.
- **GENDER, RACE/ETHNICITY.** There were few gender differences in the risk of having at least one positive mental health screen (15% of men vs. 17% of women) or in the risk of positive screens for specific disorders. By race/ethnicity, African Americans (20%) and Hispanics (19%) were at the highest risk for a positive screen, followed by Whites (16%) and Asians (10%). African Americans had a substantially higher prevalence of depression than other residents (13% vs. 6% of Whites, 8% of Hispanics and 4% of Asians).

- **AGE.** Younger residents had a somewhat higher risk of having a positive mental health screen than older residents, with 20%-23% of those under 35 screening positive compared to 14%-15% of those 35 and older. The age difference in positive mental health screens was most pronounced with respect to PTSD, with 17% of those 18 to 25 screening positive, compared to 10% or less of those 26 and older.
- **OTHER DEMOGRAPHICS.** Other demographic groups at highest risk for screening positive for at least one disorder included those with less than a high school education (25%), those who were divorced or separated (26%), the unemployed (27%) and those earning less than \$25,000 per year (28%).
- **CO-OCCURRING SUBSTANCE USE.** Residents screening positive for mental health disorders were more likely than others to use tobacco and illicit drugs. About 14% of those with no positive screens were current smokers compared to 27%-32% of those screening positive for anxiety, depression or PTSD. Similarly, 10% with no positive screens used an illicit drug in the past 12 months, compared to 23% of those with a positive anxiety screen and 32%-33% of those screening positive for depression and PTSD, respectively.
- **CO-OCCURRING SUBSTANCE ABUSE AND DEPENDENCE.** Residents with a positive mental health screen were also more likely to screen positive for substance abuse or dependence. Among all those with positive mental health screens, those with PTSD symptoms were most at risk of alcohol abuse or dependence (10% vs. 4% of residents with no positive mental health screens). Residents with depression were most at risk of drug problems, having rates of drug abuse/dependence that were three times those of residents with no mental health symptoms (9% vs. 3%).
- **REGIONAL COMPARISONS.** Overall, South Jersey residents had the highest rates of positive screens for mental health disorders and Central Jersey residents, the lowest. About 19% of South Jersey residents screened positive for at least one mental health disorder, followed by 16% of North Jersey residents and 14% of residents in Central Jersey.

TREATMENT ACCESS: SUBSTANCE ABUSE/DEPENDENCE AND MENTAL HEALTH

- **TREATMENT PREVALENCE OVERALL.** Most individuals screening positive for substance abuse/dependence and/or mental health symptoms did not receive formal treatment in the last 12 months; however, treatment rates were substantially higher for those needing mental health treatment than for those needing addiction treatment.

Overall, 58% of residents with mental health symptoms reported lifetime treatment and 33%, treatment in the last 12 months. In contrast, 38% of residents needing addiction treatment reported formal treatment in their lifetime and 16%, past 12-month treatment.

- **SELF-HELP GROUPS: SUBSTANCE ABUSE/DEPENDENCE.** Residents needing substance abuse treatment had moderate rates of attendance at self-help groups, such as Alcoholics Anonymous (AA) or Narcotics Anonymous (NA). About 41% of those needing treatment had ever attended an AA or NA group, and only 15% had attended one of these groups in the last 12 months.
- **ADDICTION TREATMENT BY SUBSTANCE OF ABUSE.** Residents with alcohol problems only were substantially less likely to have received formal treatment in the last 12 months (3%) compared to residents with a drug problem (32%), or both alcohol and drug problems (23%). However, rates of formal treatment in their lifetimes were comparable across all substance problems (36% - 39%).
- **DISPARITIES IN SUBSTANCE ABUSE TREATMENT BY GENDER AND RACE/ETHNICITY.** There were substantial gender and racial/ethnic disparities in access to addiction treatment. Among those needing treatment, men were nearly twice as likely than women to report formal addiction treatment in their lifetime (42% vs. 27%), while African Americans and White residents were more likely to report lifetime treatment than Hispanics (50% and 41% vs. 13%, respectively).
- **DISPARITIES IN MENTAL HEALTH TREATMENT BY AGE AND RACE/ETHNICITY.** There were also important racial/ethnic disparities in mental health treatment, as well as disparities according to age. Among those with mental health symptoms, White residents were substantially more likely to have accessed treatment in the last 12 months than African Americans or Hispanics (45% vs. 19% and 18%, respectively). By age, only 7% of young adults aged 18-25 with mental health symptoms had received treatment in the last 12 months, compared to 29%-51% of those in age groups older than 25.
- **THIRD PARTY TREATMENT PAYMENT.** About 81% of residents treated for substance abuse/dependence and mental health conditions reported that some or all of their treatment was paid for by a source other than their or their families' personal incomes or savings.
- **REGIONAL COMPARISONS.** Those screening positive for substance abuse or dependence in Central New Jersey were more likely to report past-year formal treatment than those in Northern or Southern New Jersey (21% vs. 14% and 12%, respectively). There were few regional differences in access to mental health treatment by those in need, however, with 32% to 34% of those with mental health symptoms reporting past-year treatment across the three regions.

NICOTINE USE

- **PREVALENCE.** Among all New Jersey residents, 39% had smoked at least 100 tobacco cigarettes in their lifetimes, 20% had smoked cigarettes in the last 12 months and 16% in the last 30 days. With respect to use of other nicotine-containing products in the past year, 9% had smoked cigars, 5% had smoked e-cigarettes containing nicotine, 2% had smoked a pipe and 1% used chewing tobacco.
- **FREQUENCY AND QUANTITY OF TOBACCO CIGARETTE USE.** About 11% of all New Jersey residents smoked cigarettes daily and about 5% of all residents were heavy smokers who smoked a pack (20 cigarettes) per day or more.
- **GENDER, AGE AND RACE/ETHNICITY.** Males were almost twice as likely as females to be current smokers⁷ (21% vs. 11%). By age, residents aged 21-25 were the most likely to be current smokers (26%) and those aged 50 and above, the least likely (12%). Current smoking was reported by 23% of residents aged 26-34 and 16% of residents aged 18-20 and 35-49. Whites, African Americans and Hispanics had comparable rates of current smoking (14%-17%), while Asians were about half as likely as other groups to smoke currently (8%).
- **AGE OF ONSET.** Altogether, 17% of New Jersey residents smoked tobacco cigarettes before the age of 15 and an additional 17% first smoked between the ages of 15 and 17. Only 6% of residents first smoked a cigarette after age 20. Early initiators (before age 15) were more likely than those smoking after age 14 to currently smoke daily and heavily, with 36% of early initiators reporting daily smoking and 14%, heavy smoking. In contrast, among those smoking after age 15, 24% smoked daily and 9%, heavily.
- **E-CIGARETTES, PREVALENCE.** Among all New Jersey residents, 11% used at least one e-cigarette in their lifetime and 7% used an e-cigarette containing nicotine.
- **E-CIGARETTES, AGE.** The majority of lifetime e-cigarette users of any type were under the age of 34, including 17% of 18-20 year olds and 27% - 28% of 21-34 year olds. In contrast, only 4% - 10% of residents in age groups over age 34 had used e-cigarettes. Although 18-20 year olds were relatively high e-cigarette users, only 9% had used an e-cigarette containing nicotine. In contrast, 26% of 21-25 year olds and 16% of 26-34 year olds used nicotine-containing e-cigarettes.
- **E-CIGARETTES, REASONS FOR USE.** Overall, health-related reasons for initiating e-cigarette use showed a consistent increase with age, rising from 33% of 18-20 year olds to

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

88% of those 50 and older. In contrast, curiosity was the primary reason for use among 18-20 year olds (55%), a reason which steadily decreased with age to 6% in those 50 and over.

- **REGIONAL COMPARISONS.** Residents of South Jersey had the highest prevalence of tobacco cigarette smoking of the three regions, with 19% reporting current smoking compared to 16% of North Jersey residents and 13% of Central Jersey residents.
- **NEW JERSEY TRENDS.** Tobacco cigarette smoking has undergone a gradual decline in the years since 1998. The proportion of residents who smoked at least 100 cigarettes in their lifetime has decreased from 46% in 1998 to 39% in 2016. Similarly, the proportion of residents who are current smokers decreased from 20% in 1998 to 16% in 2016.
- **NATIONAL COMPARISONS.** New Jersey rates of tobacco cigarette use remained well below national rates with respect to lifetime (51% vs. 63%), past 12-month (20% vs. 25%) and past 30-day (16% vs. 21%) smoking.

GAMBLING

- **PREVALENCE.** About 65% of New Jersey residents engaged in some form of gambling in the last 12 months, including 59% of residents who played the lottery, 22% who gambled in a casino, 11% who engaged in other betting such as horse racing or cards, and 6% who engaged in internet gambling, such as internet casino games or other online betting.
- **FREQUENCY.** About 47% of all residents gambled 12 or fewer times in the past year (or, about once per month or less). About 8% were frequent gamblers, reporting 50 or more gambling episodes in the past year (approximately weekly or more).
- **GENDER, AGE AND RACE/ETHNICITY.** Frequent gamblers were somewhat more likely to be male (9%) than female (7%), White (10%) or African American (9%) than Hispanic (2%) or Asian (1%), and older (10% of ages 50 and older) than younger (5% of those aged 18-20).
- **FREQUENT GAMBLING, SUBSTANCE USE AND MENTAL HEALTH.** The use of substances in the last 12 months, including nicotine, alcohol and illicit drugs, increased substantially with the frequency of past-year gambling. However, there was no relationship between gambling frequency and mental health. Compared to non-gamblers, frequent gamblers were more likely to be current smokers (34% vs. 10%), heavy drinkers (18% vs. 1%), and users of illicit drugs (38% vs. 6%). Cocaine use, in particular, was strongly associated with gambling, reported by 15% of frequent gamblers vs. 1% of non-gamblers.

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. The 2016 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 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 fourth 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. While past New Jersey Household Surveys were modeled on the National Household Survey on Drug Use and Health, (NSDUH) (Center for Behavioral Health Statistics and Quality, 2016), New Jersey's questions regarding, and calculation of, substance abuse and dependence were not comparable to the NSDUH. This year, however, New Jersey restructured its survey to enhance comparability to the NSDUH, allowing for greater accuracy in comparing New Jersey rates of substance abuse and dependence to those of the nation as a whole. As a result, New Jersey rates of substance abuse and dependence reported in the current survey should not be compared to those reported in previous New Jersey surveys, since questionnaire items, and algorithms for calculating, abuse and dependence were modified this year. Comparisons with national rates, however, are now more accurate.

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).

B. SURVEY OBJECTIVES

Obtaining reliable substance abuse treatment need estimates is critical to the state's ability to promote a rational planning and resource allocation process. As the state shifts to local and county-based planning, accurate sub-state estimates of substance abuse prevalence and treatment need are especially important to an effective local planning process. While funding restrictions prohibited the 2016 New Jersey Household Survey from obtaining a sample size sufficient to generate reliable county-level estimates, the 2016 survey focuses on developing state-level and regional (North, Central and South) estimates of prevalence, need and demand.

The 2016 telephone household survey included seven main objectives, namely to:

1. Assess the level of use of 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, drugs and tobacco by comparing 2016 study findings with those of the 2009, 2003 and 1998 New Jersey surveys.
4. Compare the use and abuse of substances to comparable national estimates from the 2015 National Survey of Drug Use and Health (Center for Behavioral Health Statistics and Quality, 2015).
5. Create regional estimates of substance use and dependence in addition to statewide estimates.
6. Assess barriers to accessing treatment services in the state.
7. 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.

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). A later 2013 study placed the number of New Jersey cell phone-only households at 19%, although this study noted that New Jersey has been converting to cell phone-only households at the lowest rate in the country, possibly because of the older age of New Jersey residents relative to 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 less 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 residents.

E. SUMMARY OF THE RESEARCH METHODOLOGY

The Sample

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 (Readers should refer to Table C-A in Appendix C for Census figures/survey estimates on the New Jersey adult population and subgroups).

The final 2016 sample consisted of a total of 1052 respondents. Funding restrictions prevented the 2016 New Jersey Household Survey from interviewing a large enough sample of residents to obtain county-level estimates of treatment need and demand. As a result, the current survey was aimed at generating statewide and regional estimates only, focusing on New Jersey's three primary regions with their associated counties: Northern (Bergen, Essex, Hudson, Morris, Passaic, Sussex, Warren), Central (Hunterdon, Mercer, Middlesex, Monmouth, Somerset and Union) and Southern (Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Ocean and Salem). By region, the survey sampled 422 respondents in Northern New Jersey, 338 in Central New Jersey and 292 respondents in Southern New Jersey. Demographic information on survey participants, including detailed information on health insurance, is presented below in Section G of the Introduction, "Profile of Survey Participants."

Weighting and Margins of Error

The data collected for the study was weighted to represent the adult population using 2015 U.S. Census estimates for New Jersey's adult population with regard to age, gender, race, ethnicity and county of residence. The exact weighting procedure is illustrated in Appendix A of this report.

At 95% confidence interval, a sample of 1052 respondents produces a statewide estimate of substance abuse treatment need with a margin of error of ± 3.02 percentage points.

Regionally, at a 95% confidence interval, the margin of error is ± 4.77 percentage points in North Jersey, ± 5.33 percentage points in Central Jersey and ± 5.73 percentage points in South Jersey.

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 include barriers to substance abuse treatment, e-cigarette use, use of medicinal marijuana, use of vaporizers for cigarette and marijuana smoking, gambling and mental health.

Additional 2016 Survey Modifications

In addition to the supplemental questions described above, other modifications were 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 helped create a more reliable instrument for developing estimates, conducting comparisons with national data and assessing trends over time moving forward. However, because the modifications are likely to have affected responses on some items, primarily in the drug use section and in the calculation of substance abuse and dependence, caution is advised when comparing these data to data obtained from previous New Jersey Household Surveys. The current changes include:

1. The informed consent administered to respondents at the start of the survey was lengthened considerably to provide potential participants with more information about their rights as survey respondents and greater assurances of their personal anonymity and the confidentiality of their responses. We suspect that the effect of this change was to enhance respondents' truthfulness in reporting illicit drug use, which, in 2016, increased for all drugs over previous state levels. Legal behaviors, however, such as alcohol and nicotine use, remained stable. With the exception of marijuana use, no other state or national drug use indicators show a spike from 2009 to 2016; we are thus interpreting the increased drug use noted in the 2016 survey to reporting changes stemming from our enhanced informed consent process.

2. The wording and structure of questions on drug use were modified to more closely resemble the NSDUH. These changes included more questions on psychotherapeutic drug misuse, with a more detailed description of the drug names included in each category of psychotherapeutic drug.
3. The wording of the questions assessing drug and alcohol abuse and dependence was modified to be more consistent with the NSDUH questions assessing abuse and dependence.
4. The algorithms used to calculate drug and alcohol abuse and dependence were modified to create greater comparability with NSDUH algorithms.

Survey Topic Areas

The specific topics included in the 2016 survey are:

- Lifetime experiences with use of nicotine-containing products, including e-cigarettes.
- Lifetime experiences with alcohol use.
- Lifetime experiences with non-medical use of drugs.
- Abuse of, and dependence on, alcohol and drugs in the last 12 months.
- Informal use of marijuana for medicinal purposes and marijuana vaping.
- Treatment history for substance use and barriers to treatment.
- Desired treatment services.
- Mental health status, including screening outcomes for depression, anxiety and post-traumatic stress disorder (PTSD).
- Co-Morbid mental health and substance abuse problems.
- Treatment history for mental health problems.
- Gambling experiences.
- Basic demographic information, including health insurance information.

Survey Administration

The final version of the survey instrument was programmed into a Computer-Assisted Telephone Interview, or CATI, system. The CATI interviews were administered between February, 2016 and April, 2016 by professional and experienced interviewers through a subcontract with SSRS,

a professional survey research firm experienced in the use of telephone and other survey techniques to collect health and human services data on behalf of governmental and other organizations. 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 A.

F. REPORT ORGANIZATION

This report is organized into eleven chapters. Following the Introduction, Chapters 2 and 3 examine usage of alcohol and both illicit and non-medical use of psychotherapeutic or over-the-counter drugs, respectively, with a focus on frequency, quantity and age of first use of these substances. This year, Chapter 3 has been expanded to include information on medicinal marijuana use and use of vaporizers (vaping). Chapter 4 explores usage of nicotine, with a particular focus on cigarette use. This year, Chapter 4 also includes information on the use of e-cigarettes. Chapter 5 explores multiple substance use, examining relationships between the use of alcohol, nicotine and illicit drugs. Chapter 6 provides statewide estimates of alcohol and drug treatment need and demand and examines past experiences with alcohol and/or drug treatment. Chapter 7 explores the prevalence of mental health disorders in New Jersey residents, with a particular focus on depression, anxiety and PTSD. Chapter 7 also reports on the prevalence of co-occurring mental health and substance use disorders and access to mental health treatment. Chapter 8 provides information on gambling behaviors in the past 12 months, including lotteries, casino gambling and internet gambling, and explores associations between gambling behavior, substance abuse and mental health. Chapter 9 provides regional information on alcohol, nicotine and drug use as well as on mental health status and treatment access. Chapter 10 compares findings from 1998, 2003, 2009 and 2016, as well as comparing the current survey to the 2015 national household survey findings reported by SAMHSA from their report entitled "Results From the 2015 National Survey on Drug Use and Health: National Findings." (Center for Behavioral Health Statistics and Quality, 2015). Finally, Chapter 11 draws conclusions and describes policy implications from findings of the current survey.

Most of these chapters also include tables and charts presenting demographic breakdowns of substance use behaviors and mental health status -- that is, the different frequencies of responses given by various sub-groups of the population regarding their substance use and mental health status. Typically, these differences are reported by gender, age, race/ethnicity, education, income, marital status and employment 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.

This report is accompanied by appendices providing more detailed information about the survey methodology and study weighting process (Appendix A), the study survey instrument (Appendix B) and detailed statistical tables (Appendix C).

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 2014 American Communities Survey (US Census, 2014). The data show that:

- Females constituted 52% of the sample and males, 48%.
- About 14% of survey respondents were in each of the youngest two age groups: 18 to 25 and 26 to 34. Twenty-seven percent of respondents were aged 35 to 49 and 45% were aged 50 or older.
- By race/ethnicity, 60% of respondents were non-Hispanic White, 13% were African American, 17%, Hispanic and 8%, Asian.
- More than 27% of respondents reported being born in a country outside of the US.
- Eighty-nine percent of respondents had a high school education or better, including 28% who were high school graduates, 26% who had some college education and 34% who were college graduates or better.
- Most (49%) of respondents were working full-time. Sixteen percent had part-time jobs, 9% were unemployed, 21% were retired or disabled, 4% were homemakers and 1%, students.
- About 20% of respondents reported annual household incomes under \$25,000. Seventeen percent earned between \$25,000 and \$49,999, 19% between \$50,000 and \$79,999 and 12% between \$80,000 and \$99,999. More than 32% of respondents earned \$100,000 or more annually.
- The majority of respondents (57%) were married or living with a partner as married. About 27% were never married, 11% were divorced or separated and 6% were widowed.
- About equal proportions of residents (16%) lived in single person households or households containing four or more people. Forty-eight percent lived in two-person households and 20% in three-person households.

Table 1-1: Demographic Characteristics of Survey Respondents

Demographics		New Jersey Sample*
<i>Gender</i>	Female	52.0%
	Male	48.0
<i>Age</i>	18 to 25	14.0
	26 to 34	14.2
	35 to 49	26.9
	50 and older	44.9
<i>Race Ethnicity</i>	White	60.0
	Black	12.8
	Hispanic	17.1
	Asian	7.6
	Other	3.2
<i>Born in the U.S.</i>	No	27.3
	Yes	72.7
<i>Education</i>	Less than high school	11.4
	High school graduate	28.4
	Some college	26.0
	College graduate	34.2
<i>Employment Status</i>	Employed full time	48.9
	Employed part time	16.0
	Unemployed	9.2
	Retired/Disabled	20.5
	Homemaker	4.3
	Student	1.3
<i>Household Income</i>	Under \$25,000	19.5
	\$25-49,999	16.9
	\$50-79,999	19.4
	\$80-99,999	12.0
	\$100,000 and over	32.2
<i>Marital Status</i>	Married or living as	57.0
	Never married	26.7
	Divorced/Separated	10.6
	Widowed	5.7
<i>Size of Household</i>	One	16.1
	Two	48.1
	Three	19.7
	Four or more	16.1

Physical Health Status and Medical Insurance Coverage

- Overall, most respondents reported being in good health, with 51% rating their health as excellent or very good and 25% reporting their health as good (Figure 1-1).
- Only 23% of residents rated their health as fair or poor.

Figure 1-1: Self-Reported Health Status of New Jersey Residents

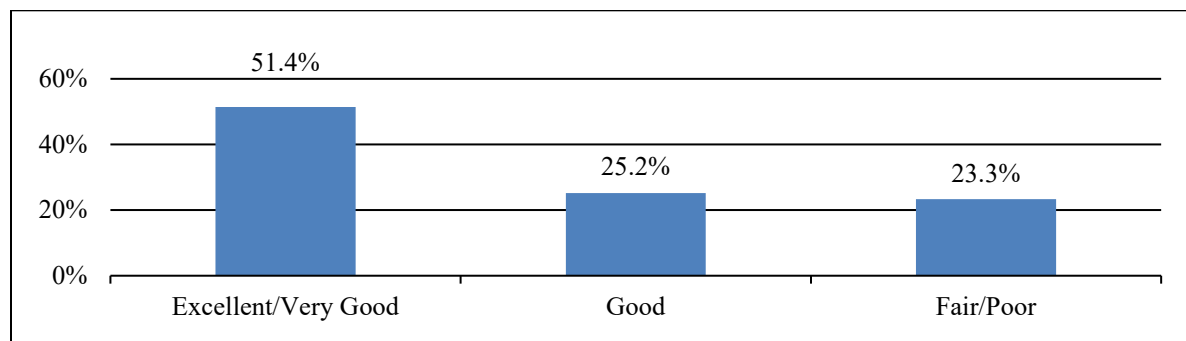
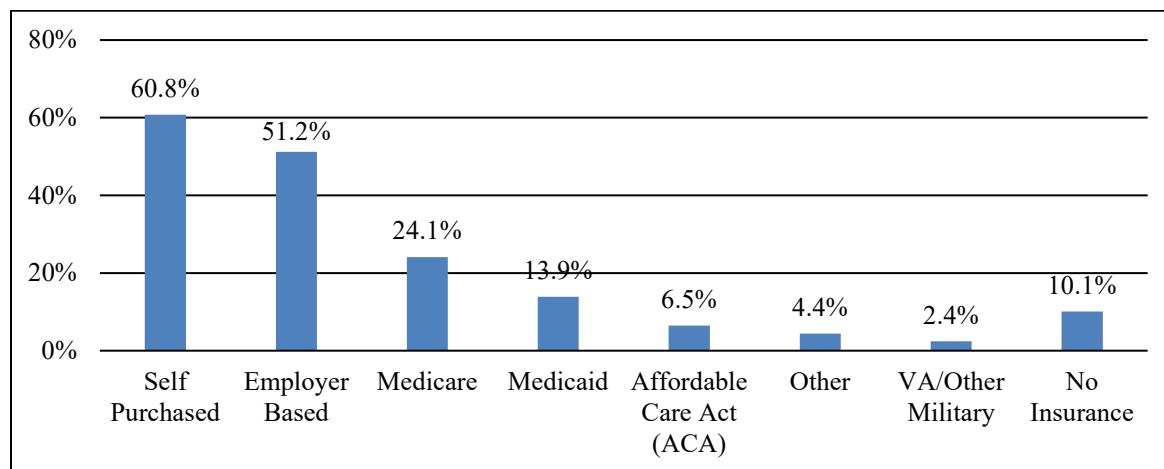


Figure 1-2 reports on sources of medical insurance coverage of survey respondents.

- Most residents reported having private insurance coverage, including either insurance they paid for themselves (61%) and/or insurance paid for by an employer (51%).
- Residents also reported having various forms of public insurance, including Medicare (24%) Medicaid (14%), Affordable Care Act (ACA) insurance obtained from the government health exchange (7%) and military insurance (2%).
- About 10% of all participants reported having no health insurance.

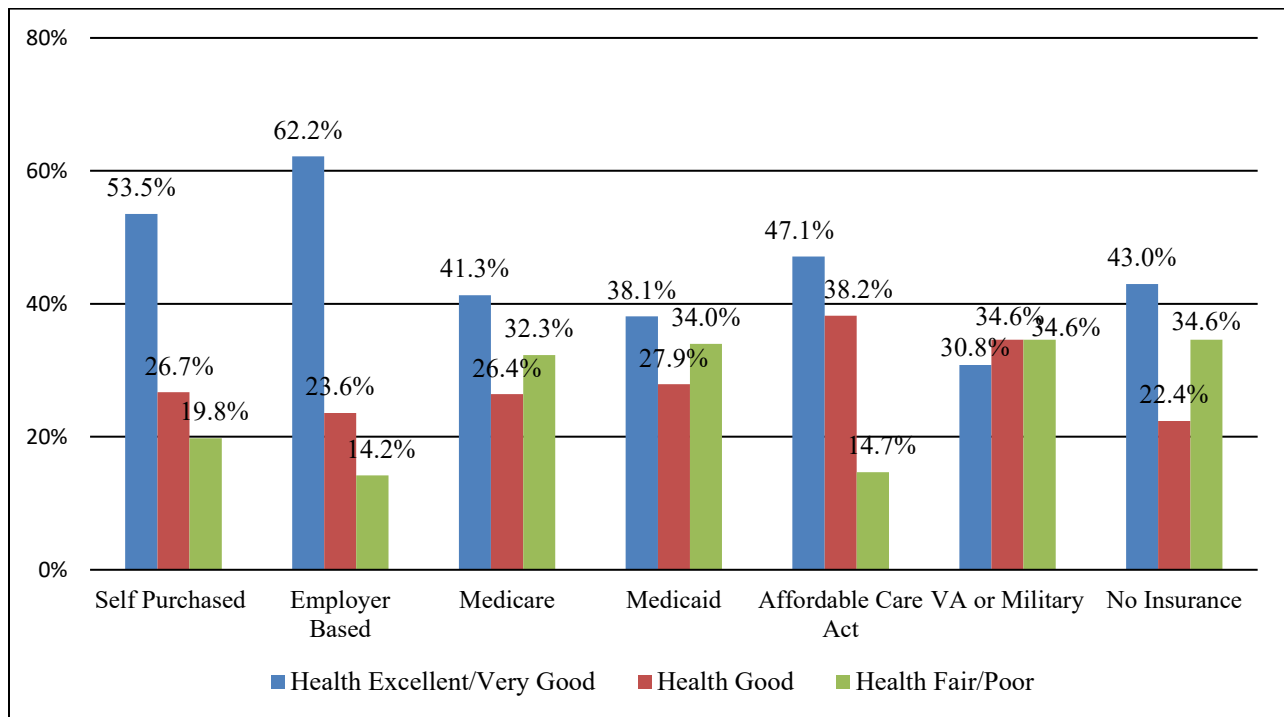
Figure 1-2: Sources of Health Care Insurance*



*Percentages do not add up to 100% because respondents often carried more than one type of insurance.

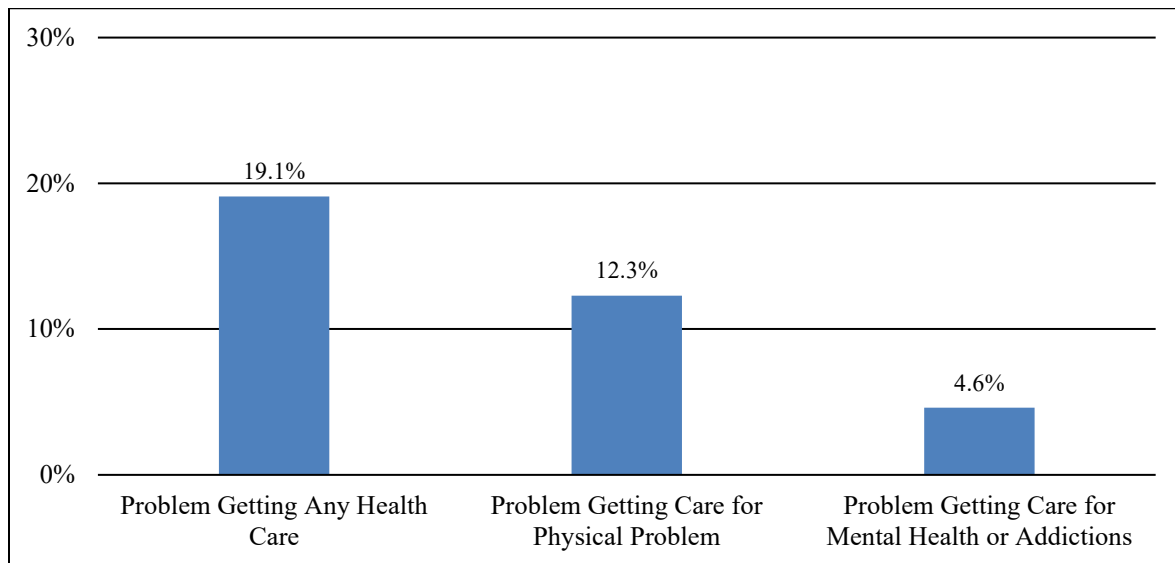
- When the health status of residents is examined by the type of health insurance they have (Figure 1-3), respondents with private insurance are substantially more likely to report good health than those with public forms of insurance or no insurance.
- Very good or excellent health is reported by 62% of those with employer-based insurance and by 54% of those with self-purchased insurance. In contrast, the proportion of those with public or no insurance reporting very good or excellent health ranges from 31% among those with military insurance to 47% of those with ACA insurance.

Figure 1-3: Self-Reported Health Status by Type of Health Insurance: All New Jersey Residents



- About 19% of residents who obtained their health care through the government health exchange reported problems obtaining health care because they had trouble paying the co-pays or deductible (Figure 1-4).
- About 12% of residents with ACA insurance had problems obtaining care for a physical problem and 5% for a mental or behavioral health problem because of high co-pays or deductibles.

Figure 1-4: Proportion of Residents with Affordable Care Act (ACA) Insurance Who Had Problems Obtaining Health Care Due to High Co-Pays or Deductibles, By Type of Health Problem



CHAPTER 2

ALCOHOL

A. INTRODUCTION

This chapter provides information on overall use of alcohol, including current and lifetime prevalence of alcohol use, the frequency and quantity of alcohol consumed, and characteristics of current and heavy drinkers. Trends in age of first alcohol use are presented and relationships between alcohol use and the use of cigarettes and illicit drugs are examined. For the purpose of this report the following definitions are used:

Drinker: Any alcohol use 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 day on at least 4 days in the past 30 days.

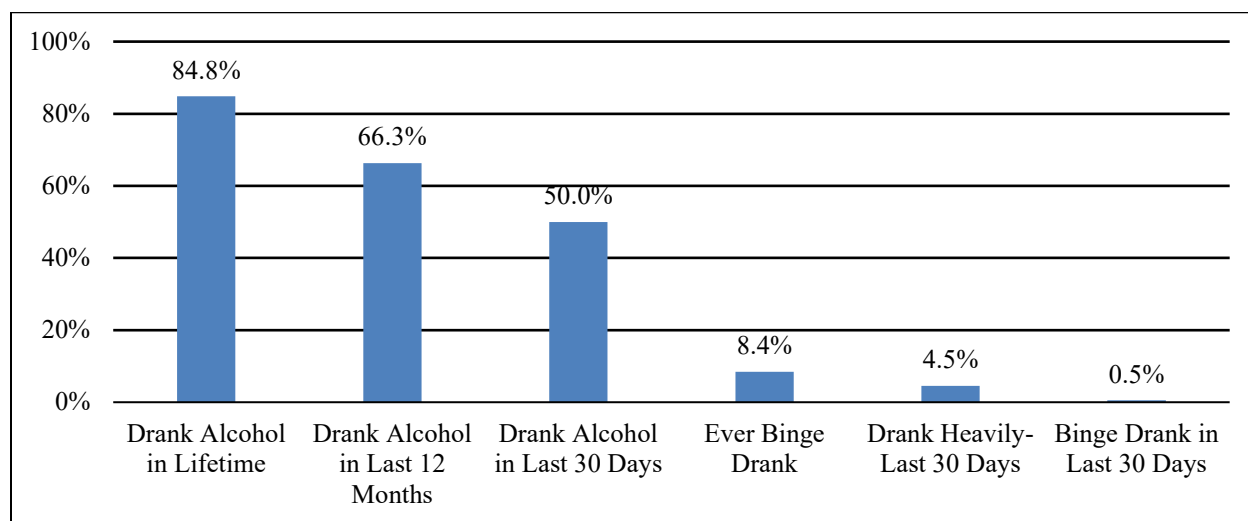
Binge Use: Drinking for two or more days straight without sobering up.

B. ALCOHOL USE: NEW JERSEY RESIDENTS

Overview

- Most residents (85%) had at least one drink of alcohol in their life, including 66% who consumed alcohol in the past year and 50% who drank in the past 30 days (Figure 2-1).

Figure 2-1: Alcohol Consumption: New Jersey Residents

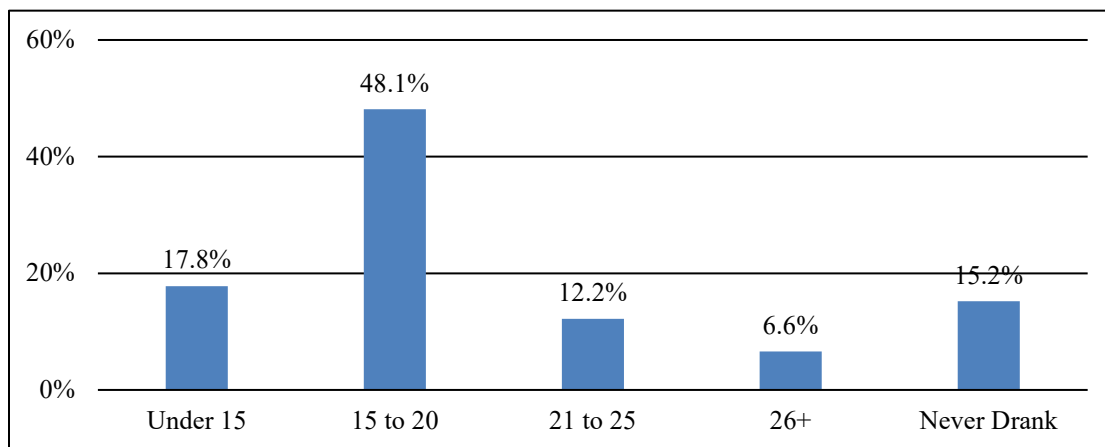


- With respect to problem drinking, more than 8% of New Jersey residents reported having engaged in binge drinking at some time in their lifetimes, and 5% reported drinking heavily in the last 30 days. Less than 1%, however, had engaged in binge drinking in the last 30 days.

Age of First Alcohol Use (Figure 2-2)

- Among all New Jersey residents, about 18% reported initiating the use of alcohol before age 15, with first use of alcohol peaking between ages 15 and 20, when 48% of residents had their first drink.
- Only 19% had their first drink of alcohol after age 20 and 15% reported never drinking in their lifetime.

Figure 2-2: Age of First Alcohol Use: New Jersey Residents



C. CURRENT DRINKERS

C1. Demographic Characteristics: Current Drinkers (Table 2-1)

Gender and Age

- Males were substantially more likely than females to be current drinkers (58% vs. 43%).
- The lowest rate of current drinking was reported by residents aged 18-20 (24%). However, current drinking increased substantially among residents at or above the legal drinking age of 21, reported by 49% of residents aged 21 to 25, close to 60% of residents aged 26 to 34, and about 51% of those aged 35 and above.

Race/Ethnicity and Place of Birth

- Non-Hispanic white residents reported the highest rates of current drinking of all racial/ethnic groups (60%). In contrast, approximately 39% of non-Hispanic Blacks, 34% of Hispanics and 29% of Asians reported current drinking.
- By place of birth, residents born in the United States were substantially more likely to report current drinking than those born outside of the United States (55% vs. 36%).

Table 2-1: Characteristics of Current Drinkers

Demographics			Proportion of New Jersey Residents Who Drank in Last 30 Days (%)
New Jersey Total Population (n=1052)			50.1
Gender	Males	(n=505)	57.6
	Females	(n=547)	43.0
Age	18-20	(n=67)	23.9
	21-25	(n=79)	49.4
	26-34	(n=146)	59.6
	35-49	(n=278)	51.1
	50+	(n=464)	51.5
Race/ Ethnicity	White	(n=631)	60.1
	Black	(n=135)	38.5
	Hispanic	(n=180)	33.9
	Asian	(n=79)	29.1
Born in the United States	Yes	(n=764)	55.4
	No	(n=287)	35.9
Marital Status	Married	(n=595)	54.5
	Never Married	(n=279)	42.3
	Divorced/Sep.	(n=110)	50.9
	Widowed	(n=60)	41.7
Education	Less than H.S.	(n=120)	22.5
	H.S. Grad.	(n=298)	47.3
	Some College	(n=273)	52.0
	College Grad.	(n=359)	60.2
Employment Status	Employed FT	(n=508)	60.8
	Employed PT	(n=166)	41.6
	Unemployed	(n=95)	37.9
	Retired/Disabled	(n=213)	41.8
Income	Under \$25,000	(n=173)	23.1
	\$25,000-49,999	(n=150)	38.7
	\$50,000-79,999	(n=172)	59.9
	\$80,000-99,999	(n=106)	65.1
	\$100,000 and over	(n=286)	67.8

Marital Status

- Married residents reported the highest rate of current drinking (55%) followed by those who were divorced or separated (51%). The lowest rates of current drinking were reported by those who were never married and widowed (approximately 42% each).

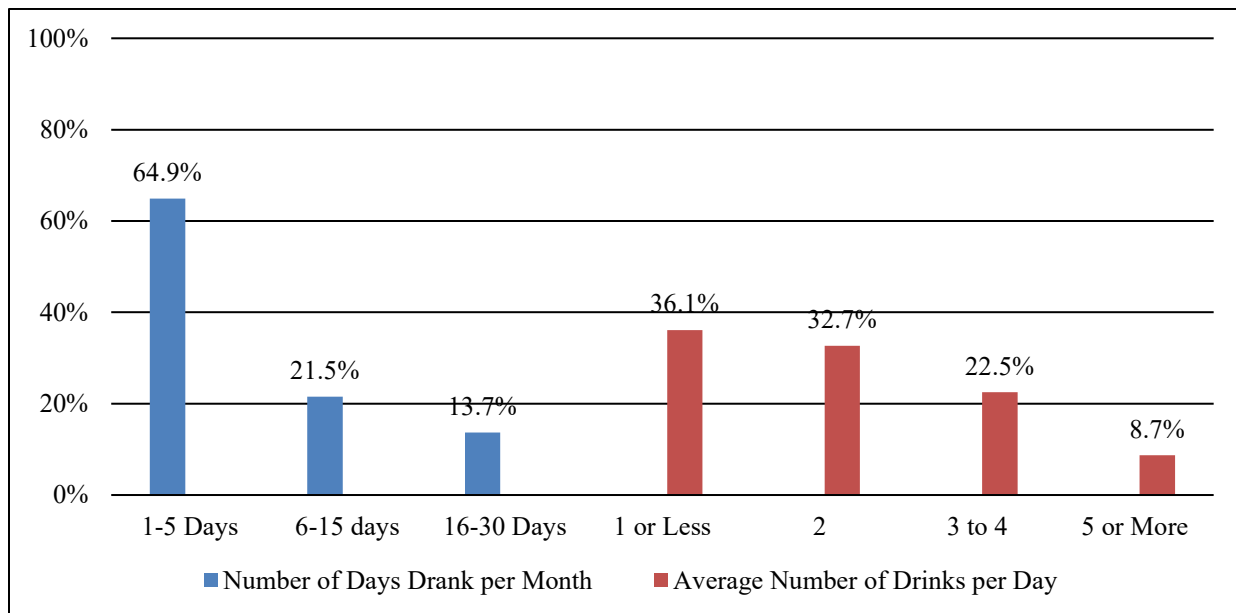
Education, Employment, Income

- The frequency of current drinking increased with educational attainment, reported by approximately 23% of those with less than a high school education, 47% of high school graduates, 52% of residents with some college education and 60% of college graduates.
- Current drinking was substantially higher among residents who were employed full-time (61%) than among residents who were employed part-time (42%), retired/disabled (42%) or unemployed (38%).
- The prevalence of current drinking increased with increasing income, rising from 23% among those earning \$25,000 per year or less to 68% among those earning \$100,000 or more.

C2. Frequency and Quantity of Alcohol Use: Current Drinkers (Figure 2-3)

- Among the 50% of New Jersey residents who drank alcohol in the last 30 days, close to 65% drank on five days or less in the last month. Approximately 22% drank on six to 15 days and 14% drank on 16 to 30 days out of the month.

Figure 2-3: Frequency and Quantity of Alcohol Use in Last 30 Days: Current Drinkers

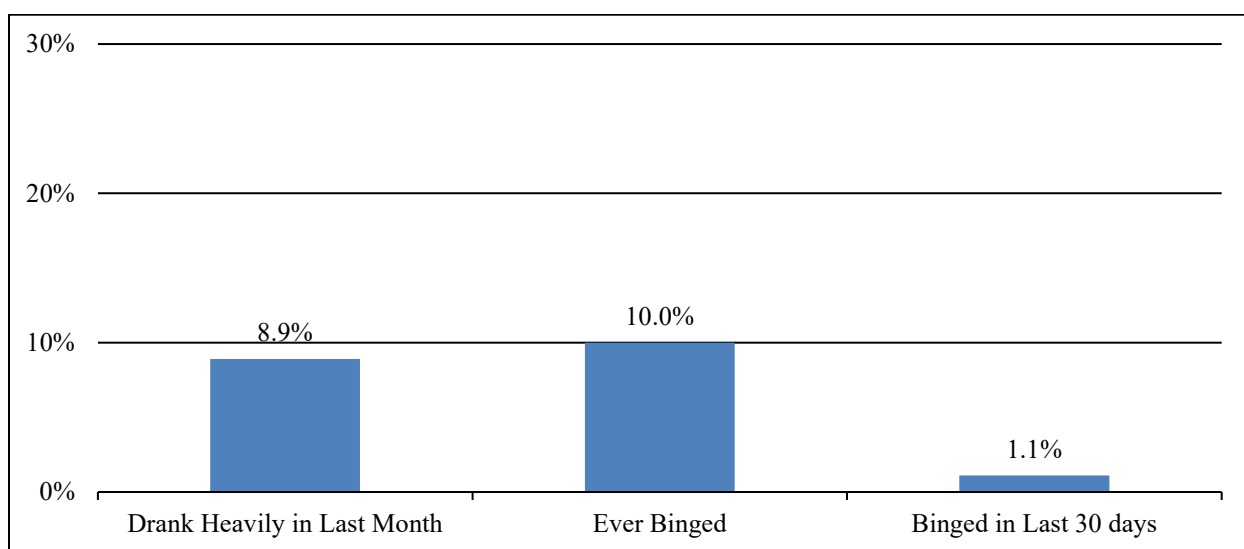


- On the days they drank in the last month, about 36% of residents reported having only one drink. About 33% reported having two drinks, 23% three to four drinks and 9%, five drinks or more.

Heavy and Binge Drinking: Current Drinkers (Figure 2-4)

- Approximately 9% of current drinkers reported drinking heavily in the last 30 days. About 10% also reported binge drinking at some time in their lives; however, only about 1% reported binge drinking in the last 30 days.

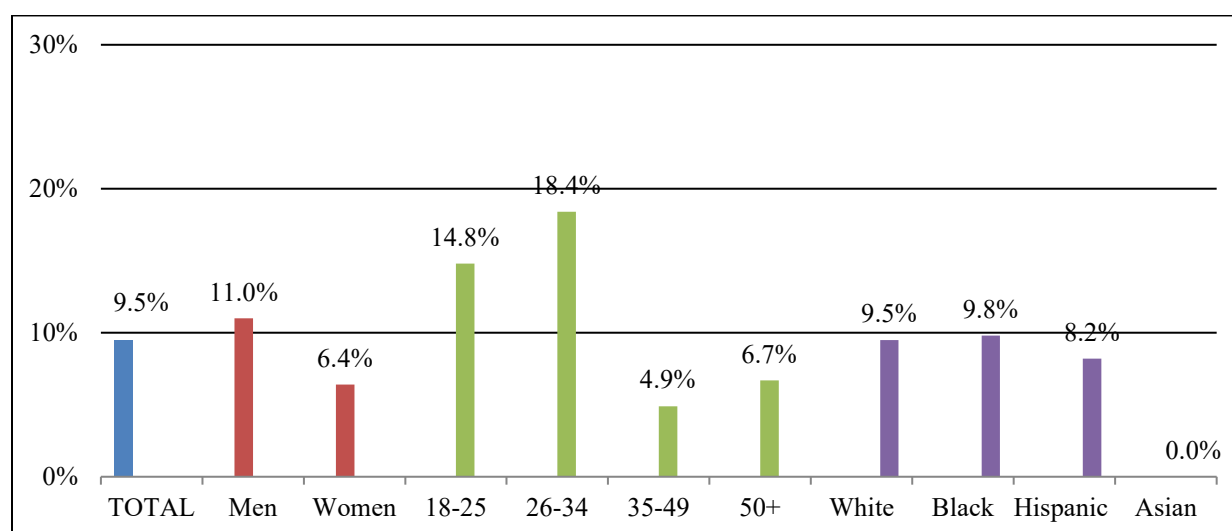
Figure 2-4: Heavy and Binge Drinking: Current Drinkers



C3. Demographic Characteristics of Heavy Drinkers: Current Drinkers (Figure 2-5)

- When the demographic characteristics of heavy drinkers were examined among New Jersey residents who drank in the last 30 days, a number of trends emerged with respect to gender, age and race/ethnicity.
- In terms of gender, men were more likely than women to have engaged in heavy drinking in the last 30 days (11% vs. 6%).

Figure 2-5: Prevalence of Heavy Drinking by Gender, Age, and Race/Ethnicity: Current Drinkers



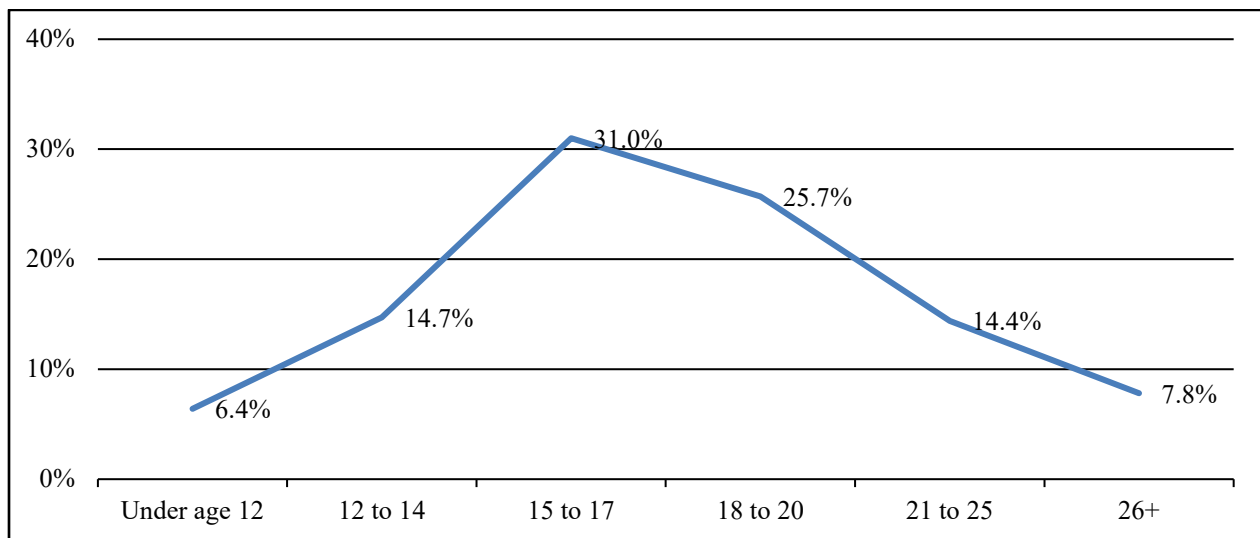
- By age, residents under age 34 were more likely to have drunk heavily in the last 30 days than those aged 35 and over. Thus, 15% of 18-25 year olds, and 18% of 26 to 34 year olds reported heavy drinking. In contrast, heavy drinking was reported by only 5% of residents 35 to 49 and 7% of those aged 50 and older.
- By race/ethnicity, there was little difference in the prevalence of heavy drinking among non-Hispanic Whites (10%), non-Hispanic Blacks (10%) and Hispanics (8%). Few Asians reported drinking heavily in the last 30 days.
- In terms of birthplace, current drinkers who were born in the United States drank heavily in the last 30 days at twice the rate of those born outside of the U.S. (10% vs. 5%).
- With respect to other demographic differences in heavy drinking, there were few remarkable differences by education, with college graduates being somewhat less likely than those with less education to drink heavily (6% of college graduates vs. 7% of those with less than a high school education, 11% of high school graduates and 11% of those with some college).
- In terms of employment, those with full-time jobs were somewhat more likely than others without full-time jobs to drink heavily (11% of full-time workers, vs. 7% of part-time workers, 8% of the unemployed and 3% of the retired/disabled).
- In terms of marital status, unmarried residents were substantially more likely to drink heavily than those who were currently or previously married. Thus, heavy drinking was reported by 15% of the unmarried, compared to 8% of married residents, 5% of those who were divorced or separated and 0% of the widowed.

- The highest prevalence of heavy drinking was found among residents with incomes between \$50,000 and \$99,999 (13%). In contrast, 9% of those earning \$100,000 or more reported heavy drinking and only 4% of those earning under \$50,000 drank heavily.

D. AGE OF FIRST ALCOHOL USE: ALL NEW JERSEY DRINKERS

- Among drinkers who ever drank alcohol in their lives, more than half (52%) reported having their first alcoholic drink before the age of 18 and 21% reported drinking before age 15 (Figure 2-6). About 26% had their first drink between ages 18 and 20 and about 14%, between 21 and 25. Only about 8% of those who have had a drink first drank alcohol after age 26.

Figure 2-6: Age of First Alcohol Use: New Jersey Drinkers



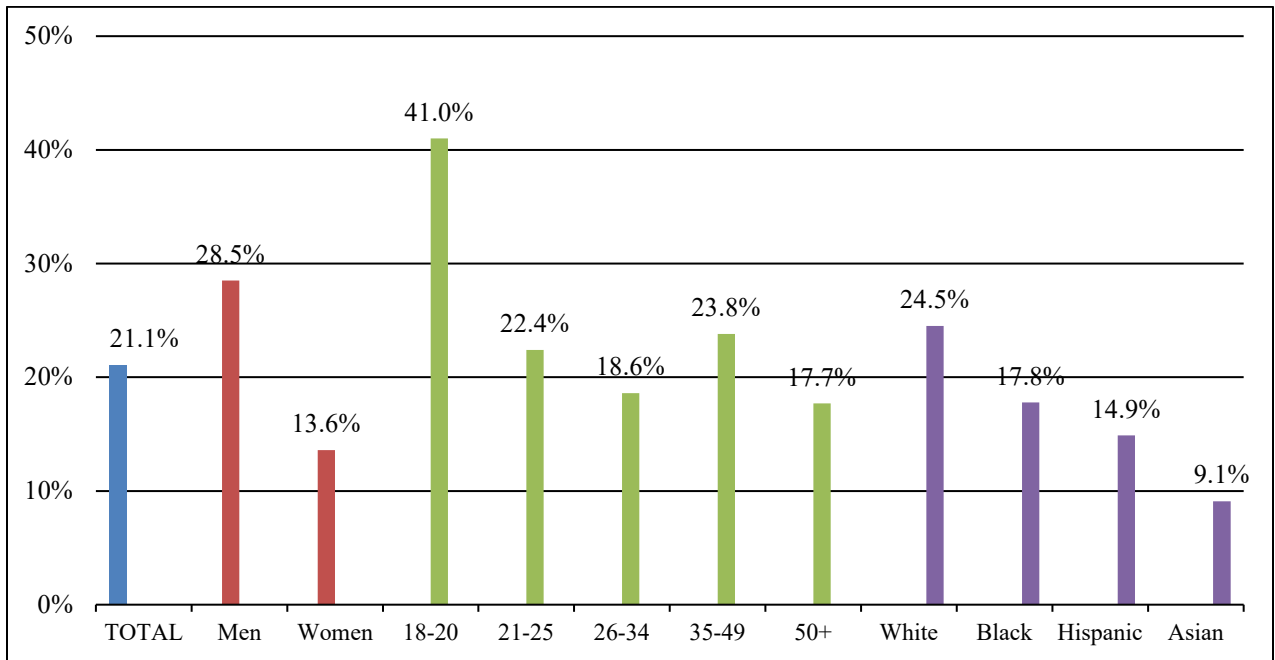
D1. Demographic Characteristics of Early Alcohol Users

Gender, Age and Race/Ethnicity (Figure 2-7)

- In terms of the demographic characteristics of early drinkers, nearly 29% of men vs. 14% of women had their first drink before age 15.
- Early drinking was most prevalent among the youngest cohort of current drinkers, with 41% of all New Jersey drinkers between ages 18 and 20 having their first drink before age 15. In contrast, only about 18% of drinkers aged 50 and above had their first drink before age 15.
- Early drinking was also more prevalent among non-Hispanic White residents (25%) than among non-Hispanic Blacks (18%), Hispanics (15%) and Asians (9%).

- Similarly, residents born in the United States were nearly twice as likely to drink before age 15 than those born outside of the US (20% vs. 12%).

**Figure 2-7: Prevalence of Early Alcohol Use (Before Age 15) by Gender, Age, and Race/Ethnicity:
New Jersey Drinkers**



Marital Status, Employment Status, Education and Income (Table 2-2)

- In terms of marital status, those who were divorced or separated had the highest prevalence of early drinking (30%), followed by those who were never married (23%), married (19%) and widowed (12%).
- There were slight differences in early drinking by education, with residents having a college education reporting the lowest prevalence (17%) and High school graduates, the highest (25%).
- By employment status, those who were retired or disabled were the least likely to report early drinking (19%) and those working part-time, the most likely (25%).

Table 2-2: Prevalence of Early Drinking (Before Age 15) by Demographic Characteristics

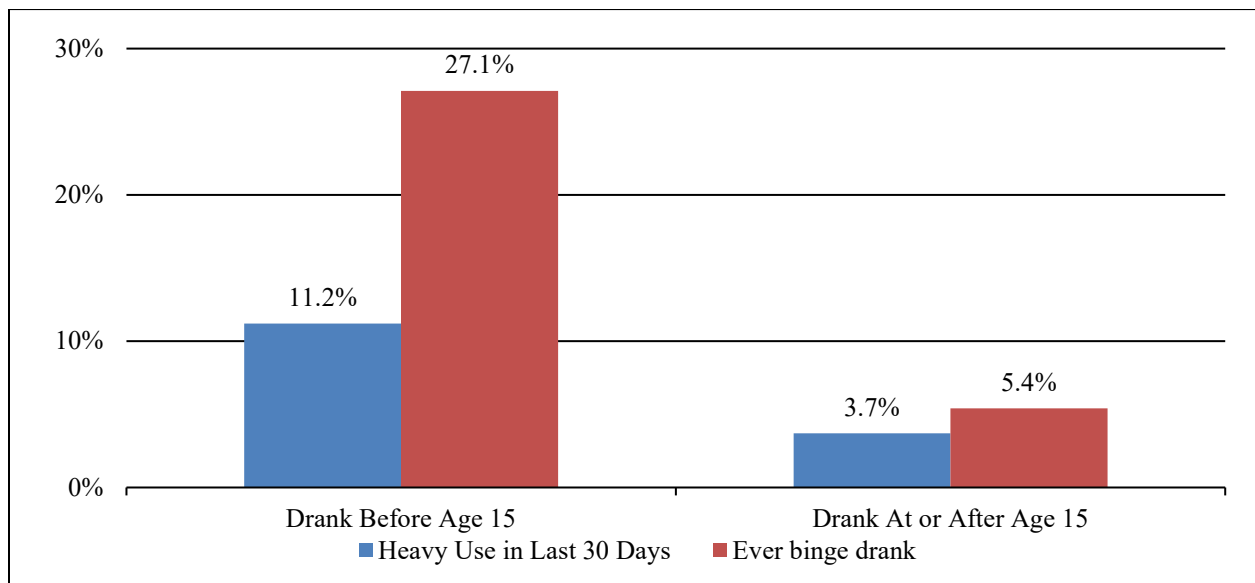
Demographics			Proportion of New Jersey Drinkers Who Had Their First Drink Before Age 15 (%)
New Jersey Drinkers (n=892)			21.1
Marital Status	Married	(n=517)	18.8
	Never Married	(n=221)	23.1
	Divorced/Sep.	(n=100)	30.0
	Widowed	(n=50)	12.0
Education	Less than H.S.	(n=83)	24.1
	H.S. Grad.	(n=254)	24.8
	Some College	(n=237)	21.5
	College Grad.	(n=316)	16.8
Employment Status	Employed FT	(n=451)	21.7
	Employed PT	(n=128)	25.0
	Unemployed	(n=73)	21.9
	Retired/Disabled	(n=188)	19.1
Income	Under \$50,000	(n=250)	21.6
	\$50,000-99,999	(n=248)	20.2
	\$100,000 and over	(n=266)	22.2

- There were no remarkable differences in early drinking by income, with early drinking reported by 20% of those in the middle income group (\$50,000-\$99,999) and about 22% of those groups earning under \$50,000 and \$100,000+.

D2. Relationship between early alcohol use (before age 15) and alcohol misuse (Figure 2-8)

- Current heavy alcohol use and lifetime binge drinking was highly related to the age at which New Jersey residents first used alcohol. Thus, among those who first drank before age 15, 11% used alcohol heavily in the last 30 days and 27% reported binge drinking in their lifetimes. In contrast, binge drinking was reported by only 5% of those who first used alcohol after age 15 and heavy drinking, by only 4% of residents who were not early drinkers.

Figure 2-8: Past 30-Day Heavy Drinking and Lifetime Binge Drinking by Age of First Alcohol Use: New Jersey 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 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 psychotherapeutic 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 are not included. In this report, we pay special attention to marijuana use, given its recent legalization in New Jersey and elsewhere for medical purposes and its legalization for recreational use in other states.

The drugs examined in this survey are consistent with those assessed in the National Survey of Drug Use and Health (Center for Behavioral Health Statistics and Quality, 2015), although the New Jersey survey did not include as detailed an assessment of individual drug types. This survey also excluded assessment of inhalants, given the low prevalence of use of these substances in prior surveys. For certain analyses in this report, prescription-type drugs are grouped together as “psychotherapeutics,” which follows the same classification scheme used in the NSDUH. The psychotherapeutics drug category includes all the prescription-type drugs, including stimulants, pain relievers and other opiates, sedatives or sleeping pills, and tranquilizers. While prescription stimulants may contain methamphetamine-type substances, we also 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 in the last 12 months. The following definitions are used in this chapter:

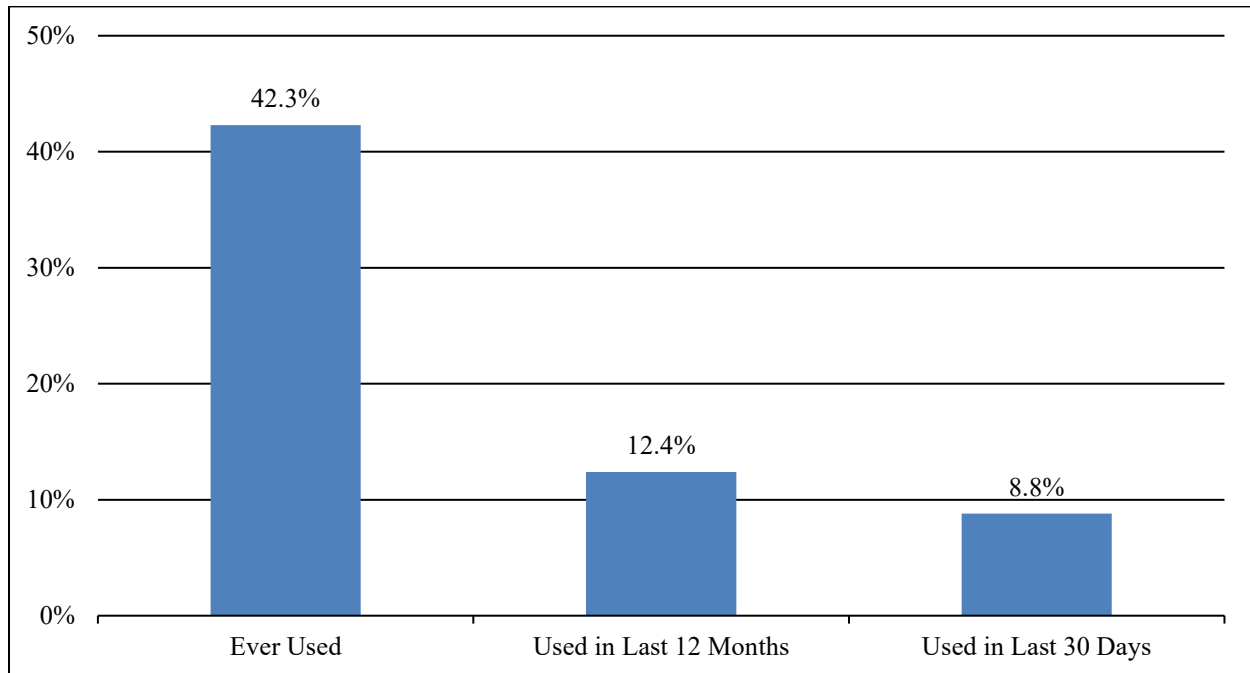
Current Users:	One or more illicit drugs in the last 30 days
Recent Users:	One or more illicit drugs in the last 12 months
Lifetime Users	One or more illicit drugs in lifetime
Multiple Users:	Two or more illicit drugs in lifetime

B. PREVALENCE OF ILLICIT USE

Prevalence of Illicit Drug Use and Timeframes for Use

- In terms of population percentages (Figure 3-1), 42% of residents reported using one or more illicit drugs in their lifetime (lifetime users), 12% used illicit drugs in the last 12 months (recent users) and 9%, in the last 30 days (current user).

Figure 3-1: Use of Illicit Drugs: All New Jersey Residents



- In terms of numbers of residents using illicit drugs (Table 3.1), these percentages translate into 2,892,597 New Jersey residents who used one or more illicit drugs at some time in their lives, 847,948 who used one or more illicit drugs in the last 12 months, and 601,770, who used one or more illicit drugs in the last 30 days.

Table 3.1 Resident Adult Population Estimates for Illicit Drug Use

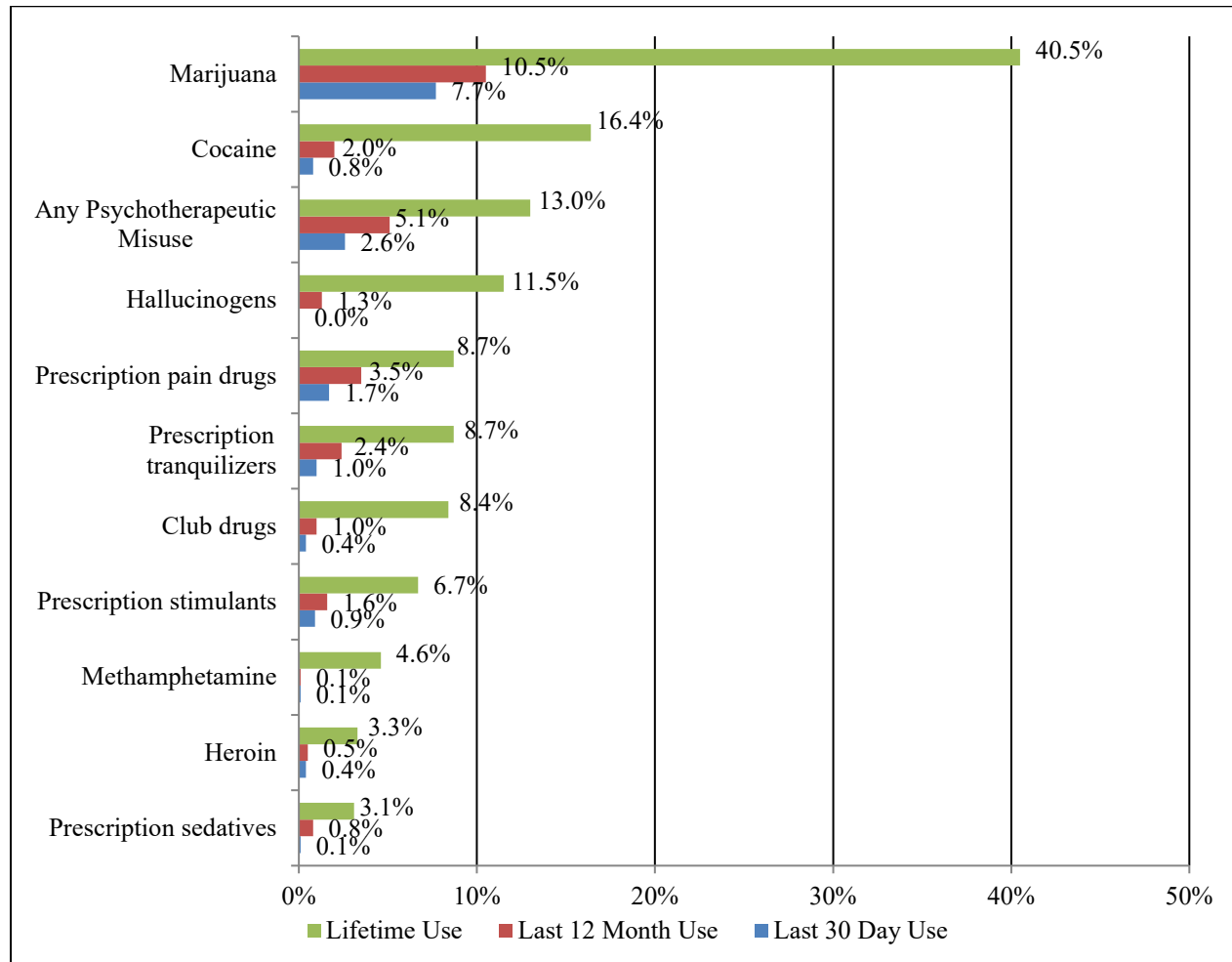
TOTAL NEW JERSEY RESIDENT ADULTS, 2014	n = 6,838,290
RESIDENTS REPORTING EVER (LIFETIME) ILLICIT DRUG USE	n = 2,892,597
RESIDENTS REPORTING PAST YEAR ILLICIT DRUG USE	n = 847,948
RESIDENTS REPORTING PAST 30 DAY ILLICIT DRUG USE	n = 601,770

Prevalence of Specific Drugs Used and Timeframes for Use (Figure 3-2)

- By far, marijuana was the most frequently reported drug of abuse by New Jersey residents with respect to lifetime, past 12-month and past 30-day use. Lifetime use was reported by 41% of all residents, past 12-month use by 11% and past 30-day use, by 8%.
- Cocaine was the second most frequently-reported lifetime drug of abuse, reported by 16% of residents. Only 2% 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, 5% in the last 12 months and 3% in the last 30 days.
- Hallucinogens were fourth in terms of lifetime prevalence, reported by 12% of New Jersey residents. Only 1% used hallucinogens in the last 12 months, however, and 0% reported use in the last 30 days.

Figure 3-2: Use of Illicit Drugs, by Drug Type and Time Frame of Use: All New Jersey Residents



- In terms of the lifetime misuse of specific psychotherapeutic drugs, prescription pain drugs and prescription tranquilizers were fifth and sixth in prevalence of use, with lifetime misuse of each substance reported by 9% of residents. Only 4% and 2%, respectively, had misused these drugs in the last 12 months, and only 2% and 1%, respectively, in the last 30 days.

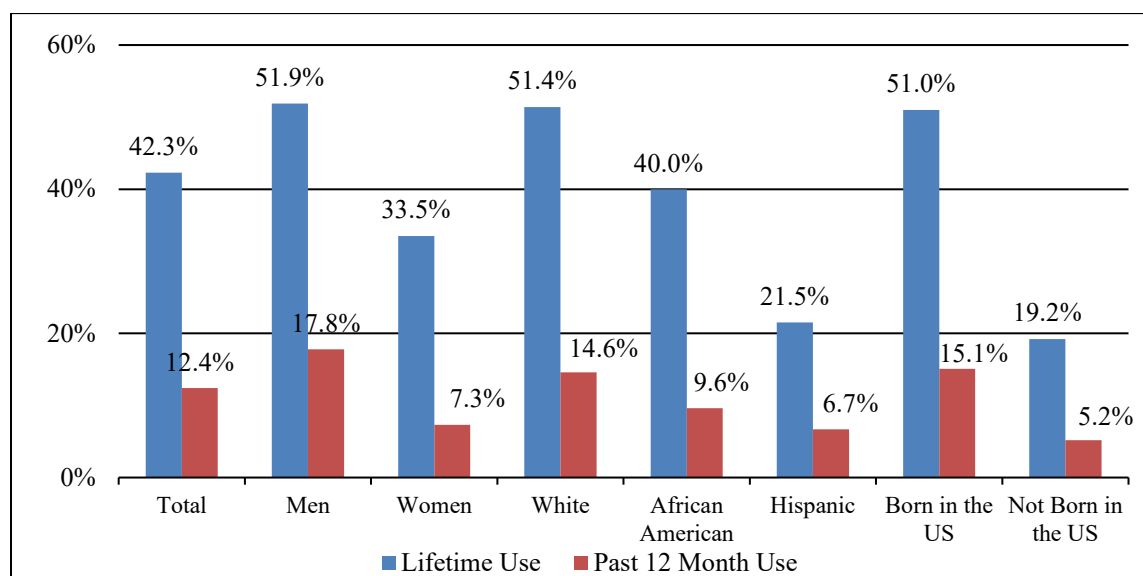
- Club drugs and prescription stimulants ranked seventh and eighth in terms of frequency of lifetime use, reported by 8% and 7%, respectively. Only 1% and 2%, respectively reported past 12-month use and less than 1%, use in the last 30 days.
- The remaining three drugs of abuse, methamphetamines, heroin and prescription sedatives, were reported by 5% or fewer of residents with respect to lifetime use and by less than 1% in term of past 12-month or past 30-day use.

C. DEMOGRAPHIC CHARACTERISTICS OF LIFETIME AND RECENT USERS OF ANY ILLICIT DRUG: ALL NEW JERSEY RESIDENTS

C1. Gender, Race/Ethnicity and Place of Birth (Figure 3-3)

- Males were more likely than females to have used at least one illicit drug in their lifetimes (52% vs. 34%) and in the last 12 months (18% vs. 7%).
- By race/ethnicity, Whites reported the highest prevalence of use of illicit substances in their lifetime (51%) and in the last 12 months (15%). In contrast, among African Americans, 40% reported lifetime and 10% past 12-month use. Among Hispanics, 22% reported lifetime use and 7% use in the last 12 months.
- Residents who were born in the US were substantially more likely to use illicit drugs in their lifetime and in the last 12 months than those born outside of the US. Thus, 51% of US-born residents reported lifetime use and 15%, past 12-month use. In contrast, 19% of residents born out of the US reported lifetime use and 5%, past 12-month use.

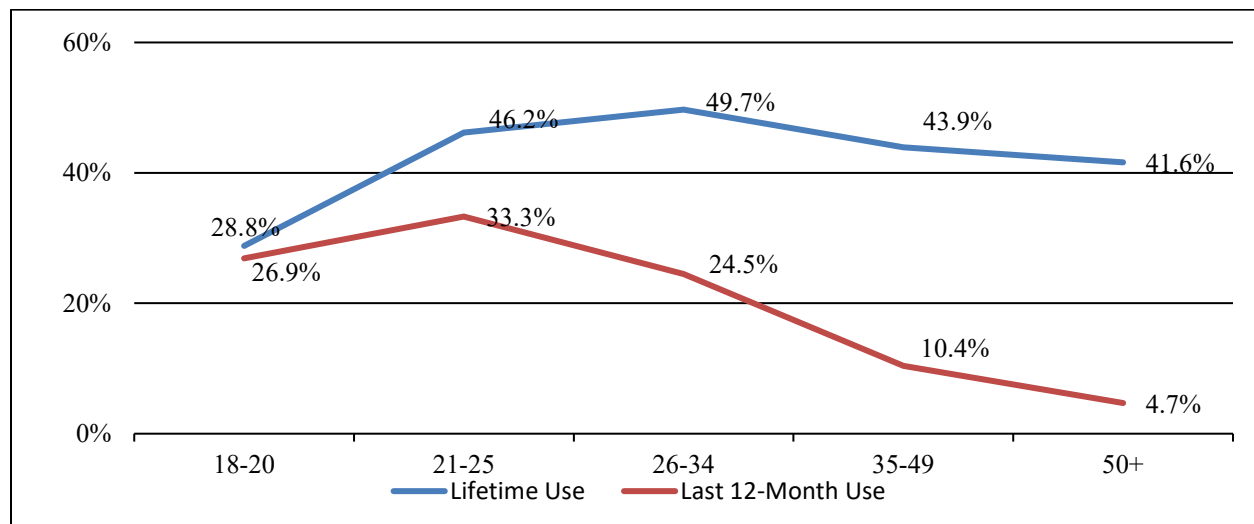
Figure 3-3: Illicit Drug Use in Lifetime and Last 12 Months, by Demographic Groups: All New Jersey Residents



C2. Age (Figure 3-4)

- The youngest residents, aged 18 to 20, showed the lowest prevalence of lifetime illicit drug use (29%) and those aged 26 to 34, the highest (50%). Forty-four percent of residents aged 35 to 49 and 42% of residents aged 50 and older reported lifetime use.
- The prevalence of recent (past 12-month) use of illicit drugs, however, was highest among younger residents, with those aged 21 to 25 having the highest prevalence (33%), and those aged 18 to 20, the second highest (27%).
- After age 25, the prevalence of past-year use decreased steadily with increasing age, falling to 24% of 26-34 year olds, 10% of 35-49 year olds and 5% of those 50 and over.

Figure 3-4: Use of Illicit Drugs in Lifetime and in Last 12 Months, by Age: All New Jersey Residents



C3. Marital Status, Education, Employment Status and Income (Table 3-2)

- When drug use was examined by marital status, the highest rates of lifetime use were reported by residents who were never married (49%) and those who were divorced or separated (49%), followed by those who were married (41%).
- Past 12-month use of drugs was also highest in the never married (25%). Thirteen percent of divorced or separated and 8% of those who were married used drugs in the last 12 months.
- Those who were widowed had the lowest rates of lifetime (17%) and past 12-month (2%) use.

Table 3-2 Illicit Drug Use in Lifetime and Last 12 Months by Selected Demographic Characteristics

Demographics		Used Illicit Drugs in Lifetime (n=1052) (%)	Used Illicit Drugs in Last 12 Months (n=1052) (%)
New Jersey Total Population (n=1052)		42.3	12.4
Marital Status	Married (n=594)	40.6	7.6
	Never Married (n=279)	49.1	24.7
	Divorced/Sep. (n=110)	49.1	12.6
	Widowed (n=60)	16.7	1.7
Education Status	Less than High School (n=120)	27.5	10.8
	High School Graduate (n=298)	41.9	17.7
	Some College (n=272)	44.5	12.9
	College Graduate or Better (n=360)	45.8	8.4
Employment Status	Full-time (n=509)	47.9	12.8
	Part-time (n=166)	39.2	12.0
	Unemployed (n=96)	37.5	16.8
	Retired/Disabled (n=213)	38.0	10.3
Income	Less than \$25,000 (n=173)	28.9	10.5
	\$25,000-\$49,999 (n=150)	38.7	9.3
	\$50,000-\$79,999 (n=172)	45.9	18.1
	\$80,000-\$99,999 (n=106)	54.7	12.3
	\$100,000+ (n=285)	53.0	11.6

- By education status, comparable rates of lifetime illicit drug use were found among college graduates (46%), those with some college education (45%) and high school graduates (42%). The lowest use was reported by those with less than a high school education (28%). With respect to recent use, however, high school graduates had the highest rate of past-year illicit drug use (18%) and college graduates, the lowest (8%). Recent use was reported by 11% of those with less than a high school education and 13% of those with some college education.
- With respect to employment status, full-time workers reported the highest frequency of lifetime illicit drug use of all employment groups (48% vs. 38% of both the unemployed and the retired/disabled and 39% of part-time workers). The unemployed, however, had the highest rate of recent use (17%), with recent use ranging from 10% among the retired or disabled to 12% among part-time workers and 13% among those employed full time.

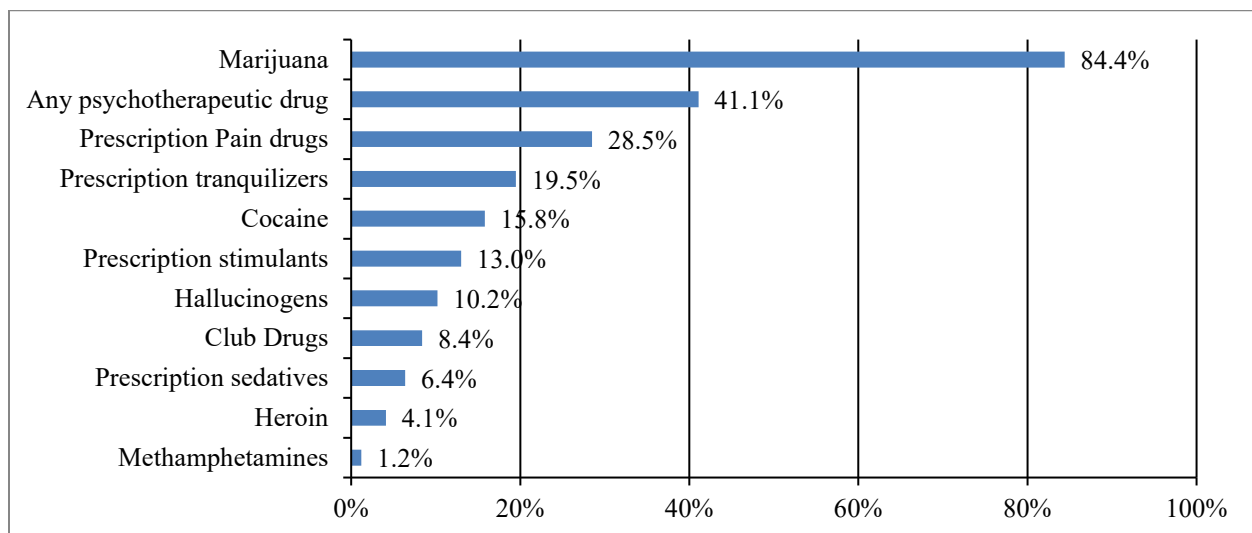
- Lifetime illicit drug use was lowest among those earning less than \$25,000 per year (29%) and tended to increase with increasing income, rising to 39% of those earning \$25,000-\$49,999, 46% of those earning \$50,000-79,999, 55% of those earning \$80,000-99,999 and 53% of those earning \$100,000 or more. Recent use was highest among those earning \$50,000-79,999 (18%) and lowest among those in the \$25,000-49,999 income group (9%). About 11%-12% of other income groups reported recent use.

D. PAST YEAR ILLICIT DRUG USERS: PATTERNS OF DRUG USE AND DEMOGRAPHIC CHARACTERISTICS OF RECENT USERS, BY DRUG TYPE

D1. Prevalence of Drug Use in the Last Twelve Months, by Type of Drug: Recent Users (Figure 3-5)

- Among those using drugs in the last 12 months, marijuana was, by far, the most frequently used drug, reported by 84% of recent illicit drug users.
- The psychotherapeutic drug category was next in frequency, reported by 41% of recent users. The most frequently used individual psychotherapeutic drugs, which were next among all drugs in overall frequency of use, were prescription pain killers (29%) and prescription tranquilizers (20%).
- Fifth in reported overall frequency of use was cocaine (16%), followed by prescription stimulants (13%).
- Hallucinogens, club drugs, prescription sedatives, heroin and methamphetamines were each reported by 10% or fewer of recent drug users, with methamphetamine having the lowest frequency of use (1%).

Figure 3-5: Drugs Used in Last 12 Months by Category of Drug: Recent Drug Users

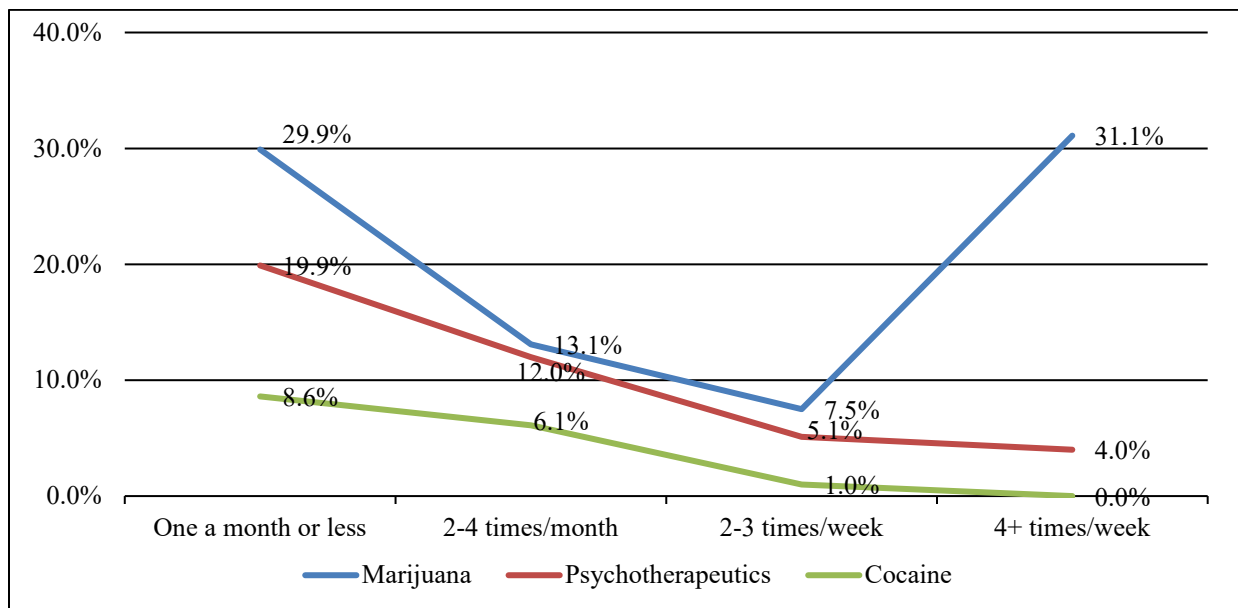


D2. Frequency of Use: Recent Users (Figure 3-6)

In Figure 3-6, we report frequency of use for the three most frequently-used drug types by those who used drugs in the last year. All prescription-type drugs, including pain killers, tranquilizers, stimulants and sedatives, are combined into the category of psychotherapeutic drugs which, as a group, were second in prevalence of use to marijuana.

- Recent drug users reported strikingly different patterns of use with respect to the three drug types. In terms of marijuana use, the majority of recent drug users reported either low (once a month or less) or high (four times/week or more) use, with substantially fewer respondents reporting medium use. Thus, 30% of recent drug users reported low use and 31%, high use, with only 13% using two to four times a month and 8%, two to three times a week.
- In contrast, both psychotherapeutics and cocaine were most likely to be used with low frequency, with the proportions of drug users steadily decreasing as the frequency of use rose. With respect to psychotherapeutics, 20% of recent drug users reported low use, 12% reported using two to four times/month, 5%, two to three times/week and 4% reported high use. Similarly, in terms of cocaine, 9% reported low use, 6% reported using two to four times/month, 1%, two to three times/week and 0%, four times a week or more.

Figure 3-6: Frequency of Drug Use in the Last 12 Months¹: Recent Drug Users



¹ For users of multiple psychotherapeutic drugs, frequency is reported for the psychotherapeutic drug they used the most.

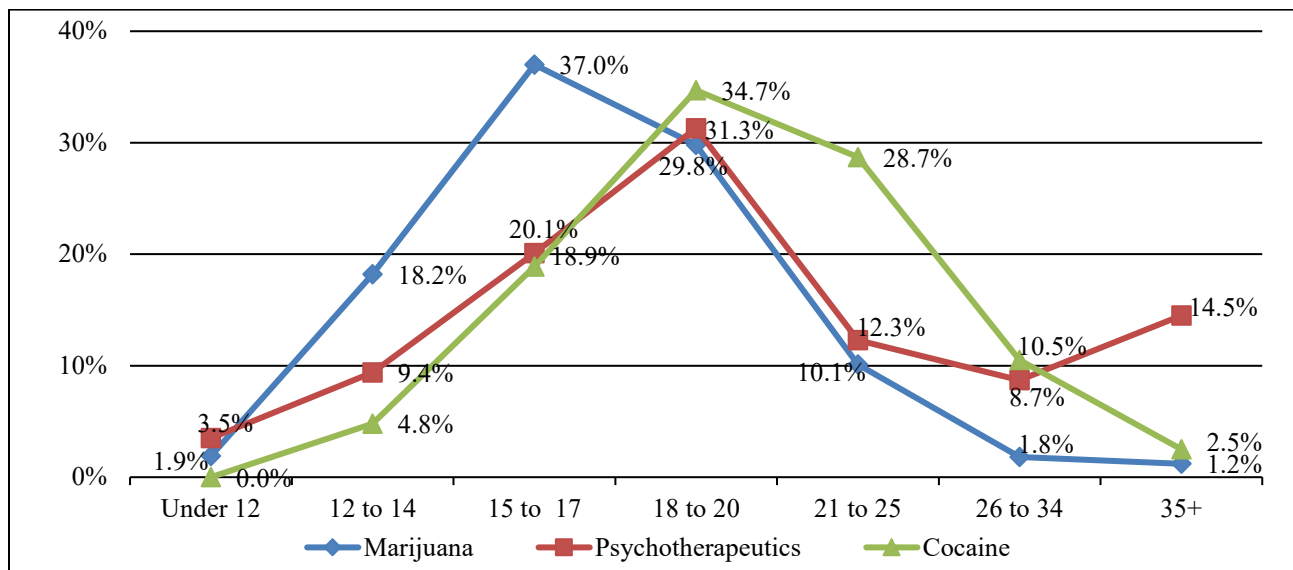
E. AGE OF FIRST DRUG USE AND TRENDS IN RECENT USE: LIFETIME ILLICIT DRUG USERS

This section reports the age of first use by lifetime users of the three most frequently used categories of drugs, marijuana, psychotherapeutics and cocaine, and examines relationships between the age of first use of these drugs and trends in recent use.

E1. Age of First Use (Figure 3-7)

- As shown in Figure 3-7, marijuana use was initiated earlier in life than either cocaine or psychotherapeutics, with about 57% of lifetime marijuana users initiating use before age 18. In contrast, 33% of psychotherapeutic users and 24% of cocaine users initiated use before age 18.
- First use of marijuana peaked between the ages of 15-17, when 37% of lifetime marijuana users first used the drug. In contrast, first use of psychotherapeutics and cocaine peaked at ages 18-20, with 35% of psychotherapeutic users and 31% of cocaine users first using the drugs at this age.
- While the first use of both marijuana and cocaine declined steadily with age after peaking at 15-17 and 18-20, respectively, first psychotherapeutic use declined through ages 26-34, then rose again during the ages of 35-49, showing an uptick in first use from 10% during ages 26-34 to 15% during ages 35-49.

Figure 3-7: Age of First Use of Selected Drugs¹: Lifetime Illicit Drug Users



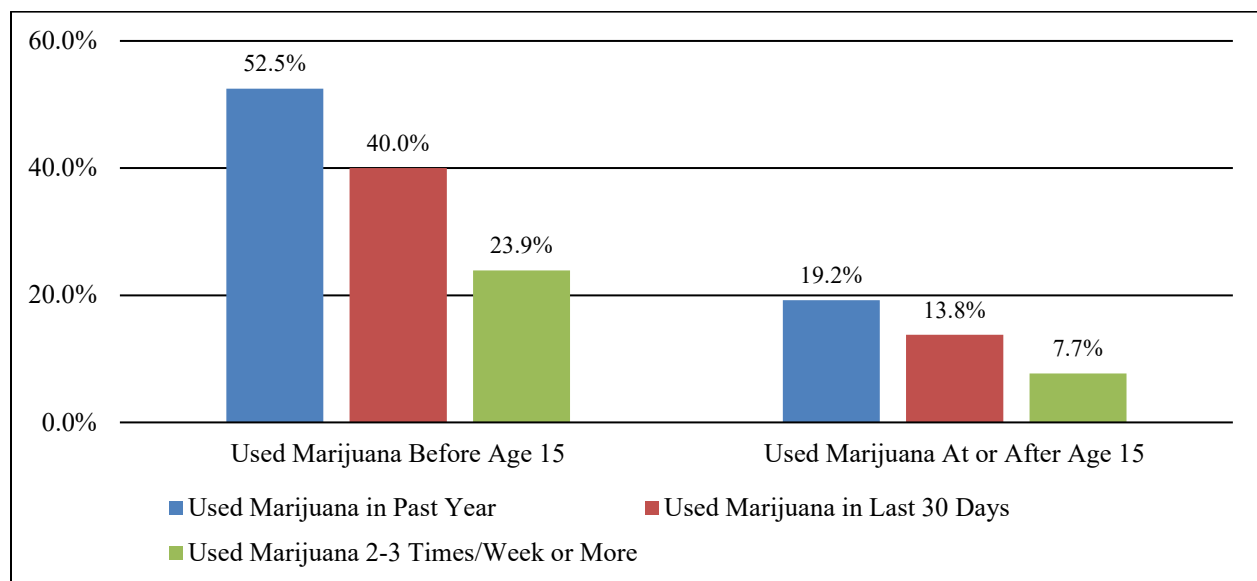
¹ For users of multiple psychotherapeutic drugs, age of first use represents the earliest age at which they used any psychotherapeutic drug.

E2. Relationship between Age of First Use and Trends in the Use of Marijuana and Psychotherapeutic Drugs: Lifetime Illicit Drug Users

Marijuana Use (Figure 3-8)

- Lifetime drug users who first used marijuana before the age of 15 were more likely to have used marijuana in the last 12 months and last 30 days than those initiating use at age 15 or older. Early marijuana users were also more likely to currently use marijuana more frequently than those initiating use later.
- Among early marijuana initiators, 53% used marijuana in the last 12 months compared to 19% of later initiators. Similarly, 40% of early initiators vs. 14% of later initiators used marijuana in the last 30 days. With respect to frequency of use, 24% of early initiators used marijuana two to three times a week or more compared to 8% of later initiators who used the drug with this frequency.

Figure 3-8: Recency and Frequency of Marijuana Use, by Age of First Use: Lifetime Illicit Drug Users

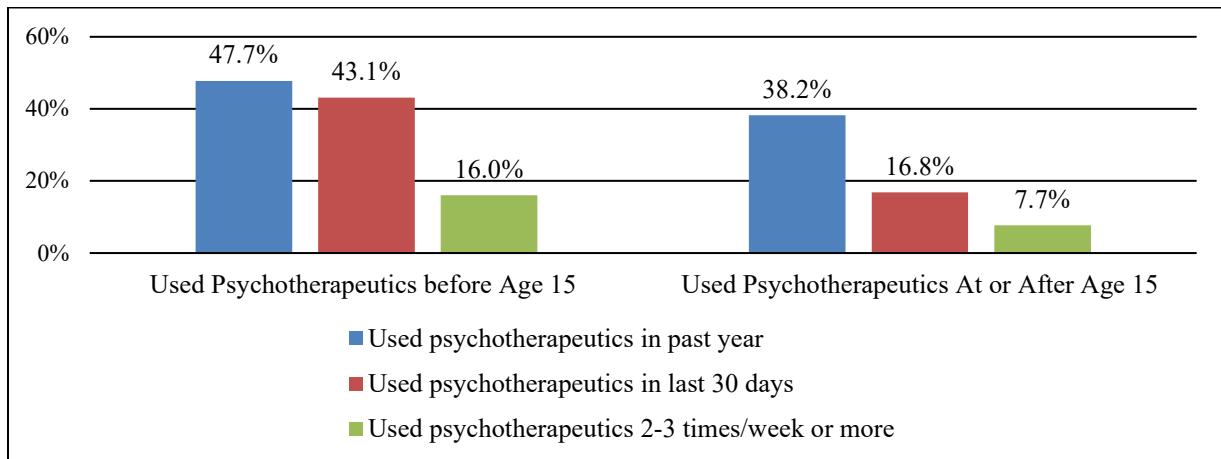


Psychotherapeutic Drug Use (Figure 3-9)

- Early use of psychotherapeutics (before age 15) was also related to higher rates of current, recent and frequent use of psychotherapeutic drugs, although the relationships were not as marked as those found with respect to marijuana.

- About 48% of early initiators vs. 38% of later initiators used these drugs recently and 43% of early vs. 17% of later initiators used them in the last 30 days. In terms of frequency, 16% of early initiators compared to 8% of later initiators used psychotherapeutics two to three times per week or more.

Figure 3-9: Recency and Frequency of Psychotherapeutic Use, by Age of First Use: Lifetime Illicit Drug Users



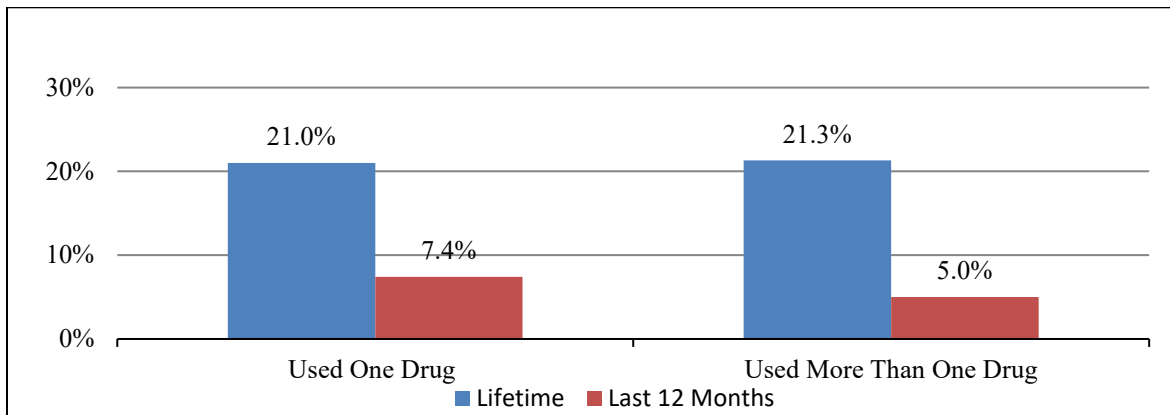
F. MULTIPLE DRUG USE

F1. Overall Prevalence of Multiple Drug Use and Types of Drugs Used

Prevalence (Figure 3-10)

- Approximately 21% of all residents used multiple drugs in their lifetime and 5% used multiple drugs in the last 12 months. Similar proportions used a single drug, with 21% reporting the use of one drug type only in their lifetime and 7% reporting use of only one drug in the last 12 months.

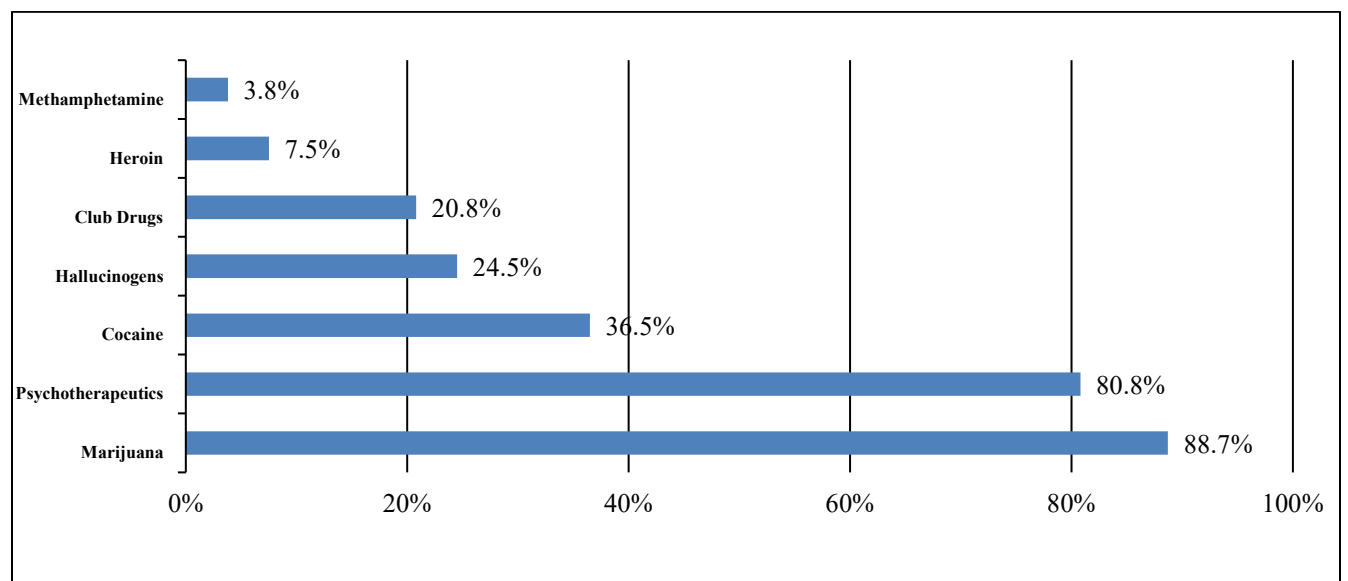
Figure 3-10: Multiple Drug Use in Lifetime and in Last 12 Months: New Jersey Residents



Drugs Used by Single and Multiple Drug Users (Figure 3-11)

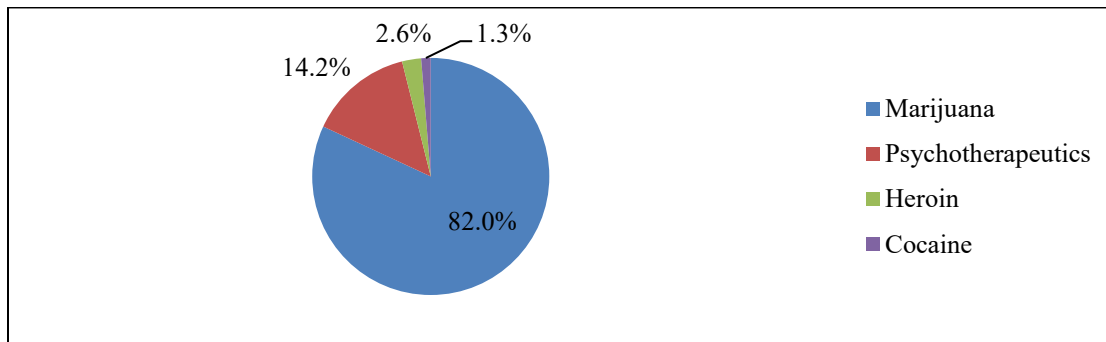
- Among users of multiple drugs in the last 12 months, marijuana and psychotherapeutic drugs were the most frequently used drugs. Marijuana use was reported by 89% of multiple users and psychotherapeutics, by 81%.
- The remaining drugs were used at less than half the frequency as marijuana and psychotherapeutics, with 37% of multiple drug users reporting cocaine use, 25% hallucinogen use and 21%, the use of club drugs. Only 8% and 4%, respectively, reported using heroin and methamphetamine.

Figure 3-11: Drugs Used by Multiple Drug Users in Last 12 Months: Recent Drug Users



- Among users of single drugs (Figure 3-12), marijuana was the most frequently-reported drug used in the last 12 months (82%). Psychotherapeutic drugs, although second in prevalence to marijuana, were reported by only 14% of single drug users.
- Single drug users reported use of only two other drugs in the last 12 months: heroin, which was used by 3%, and cocaine, which was used by 1%.

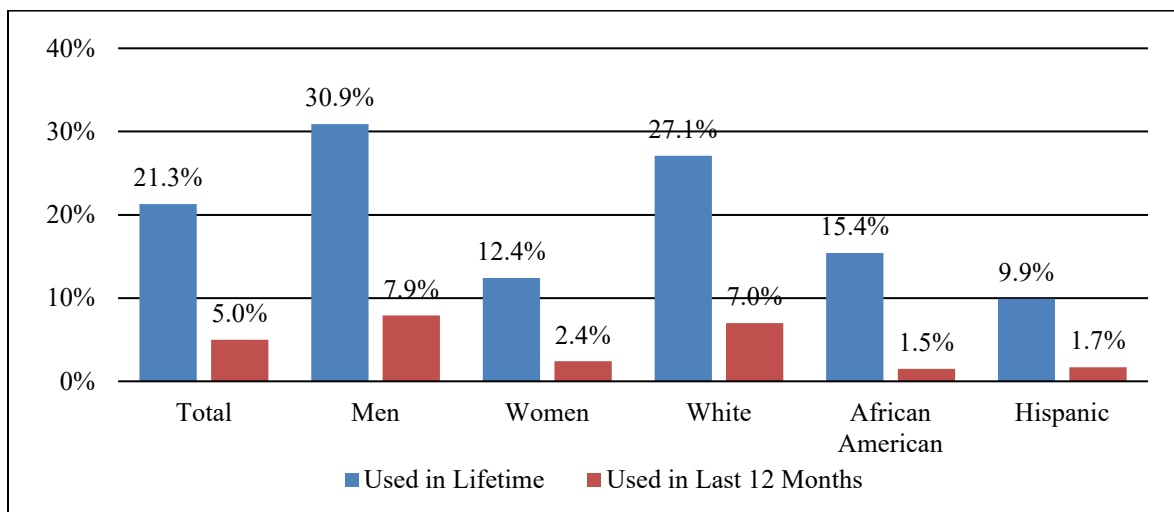
Figure 3-12: Drugs Used by Single Drug Users in Last 12 Months: Recent Drug Users



F2. Characteristics of Multiple Drug Users: Gender, Race/Ethnicity and Age

- As shown in Figure 3-13, men were substantially more likely than women to have used multiple drugs in their lifetime (31% vs. 12%) and in the last 12 months (8% vs. 2%).
- With respect to race/ethnicity, the highest prevalence of multiple drug use was found among White residents, with 27% using multiple drugs in their lifetime and 7% in the last 12 months. Lifetime use of multiple drugs among African Americans was slightly more than half the White rate (15%) and, among Hispanics, slightly more than one third the White rate (10%). Only 2% of African Americans and Hispanics used multiple drugs in the past 12 months.

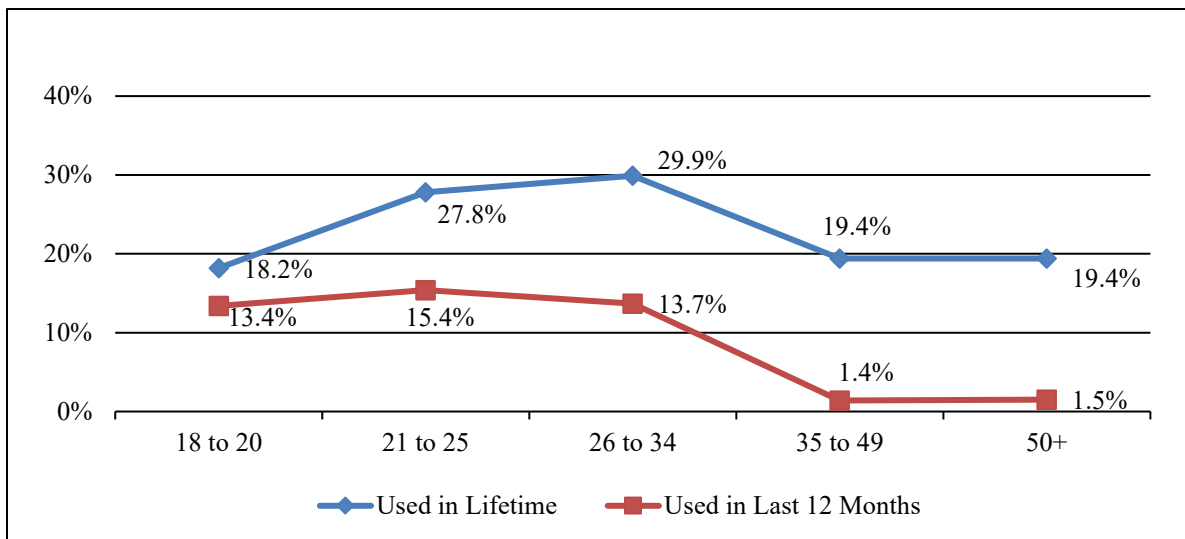
Figure 3-13: Use of Multiple Drugs, by Gender and Race/Ethnicity: New Jersey Residents



- By age (Figure 3-14), lifetime multiple drug use was most prevalent among those aged 21-25 (28%) and 26-34 (30%). In the remaining age groups, rates of multiple drug use ranged from 18% of 18-20 year olds to 19% of those in the 35-49 and 50 and older age groups.

- Past 12-month multiple drug use was reported most frequently by those under age 34, with a substantial decline in recent use occurring after age 35. In younger adults, 13% of 18-20 year olds, 15% of 21-25 year olds and 14% of 26-34 year olds reported multiple drug use. Over age 35, however, only 1%-2% of residents reported using multiple drugs in the past year.

Figure 3-14: Use of Multiple Drugs, by Age: New Jersey Residents



G. TRENDS IN MARIJUANA USE

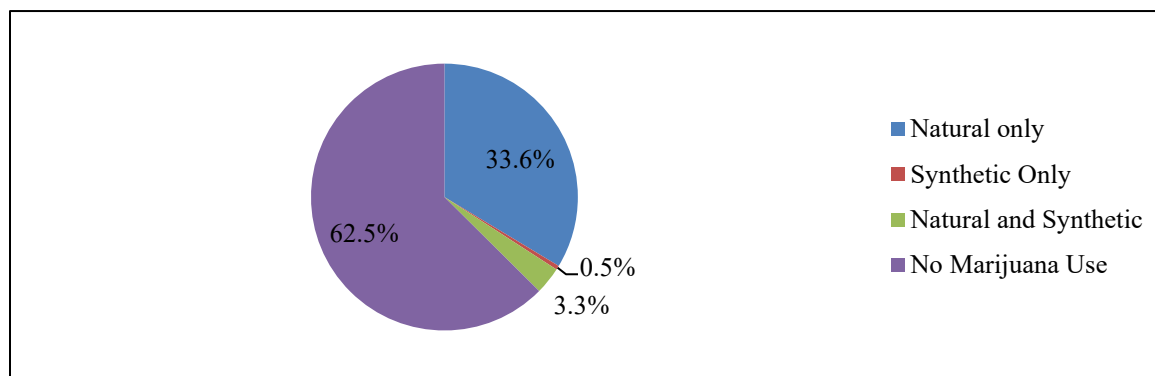
This section provides more detail on trends in the use of marijuana, given the legalization of the medical use of the drug in New Jersey and its increasing social acceptance nationally. We first examine the forms of marijuana used by New Jersey residents, focusing in the beginning of this section on the use of what is commonly called “synthetic marijuana.” According to the National Institute on Drug Abuse, synthetic marijuana refers to a number of man-made chemicals that are added to plant material or reduced to liquids so they can be smoked or vaporized in e-cigarettes and other devices (National Institute on Drug Abuse, 2015). These chemicals are called synthetic marijuana because they are related to chemicals found in the marijuana plant but may have more powerful, unpredictable and damaging effects. Because these substances are classified as “new psychoactive substances” (NPS) that have yet to be regulated by the federal government, they are often legally available in drug paraphernalia stores, novelty stores, gas stations and on the Internet.

Subsequent topics in this section focus on the use of vaporizers and e-cigarettes for marijuana use as well as on medicinal marijuana use. The prevalence of these uses of marijuana is described and demographic trends in marijuana vaping and medicinal use are examined.

G1. Types of Marijuana Used, Synthetic vs. Natural: New Jersey Residents (Figure 3-15)

- About 4% of all New Jersey residents have used synthetic marijuana at some time in their lives. Among lifetime marijuana users, about 10% report using the synthetic drug.
- Fewer than 1% of residents have used synthetic marijuana only. The majority of those who used synthetic marijuana also used natural marijuana, with 3% of state residents reporting use of both substances.

Figure 3-15: Lifetime Marijuana Use, by Type: New Jersey Residents

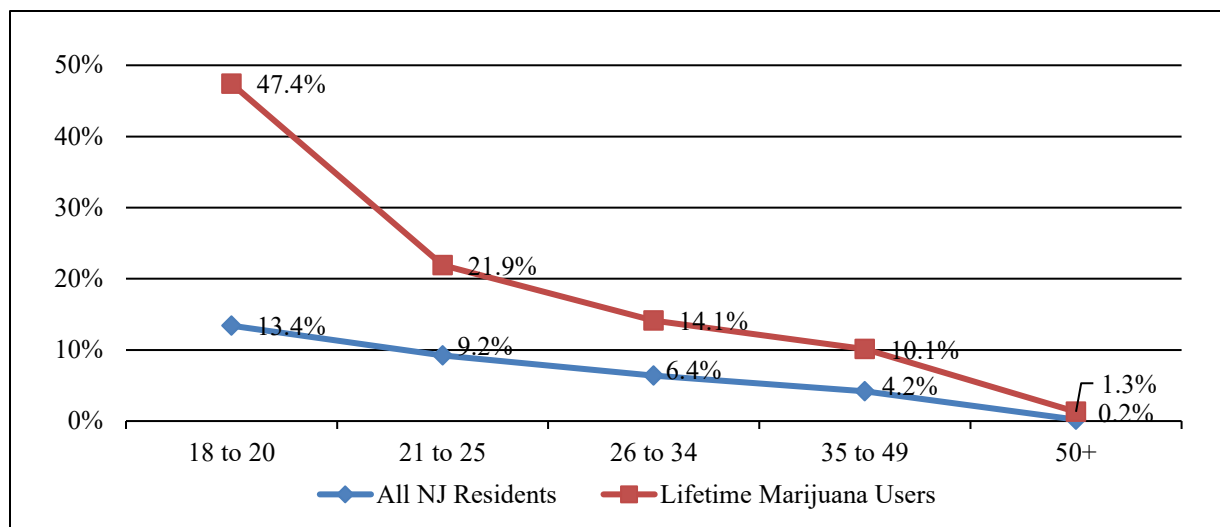


G1a. Characteristics of Synthetic Marijuana Users: Age, Gender and Race/Ethnicity

Age

- The most striking demographic trend in the use of synthetic marijuana occurred by age, with those under 21 accounting for the vast majority of users (Figure 3-16). Among 18-20 year olds, 13% of all New Jersey residents in this age group, and 47% of 18-20 year old marijuana users, had used synthetic marijuana some time in their lives.
- Among marijuana users, there is a more than 50% drop in the use of synthetic marijuana after age 20, with the proportion of users falling to 22% of 21-25 year olds. This decline continues through subsequent age groups, falling to 14% of 26-34 year olds, 10% of 35-49 year olds and 1% of those 50 and older.
- In the general population, there is a similar, though not as pronounced, decline in the proportion reporting synthetic marijuana use after age 20, with use decreasing to 9% of 21-25 year olds, 6% of 26-34 year olds, 4% of 35-49 year olds and less than 1% of those 50 and older.

Figure 3-16 Lifetime Use of Synthetic Marijuana by Age: All New Jersey Residents and Lifetime Marijuana Users



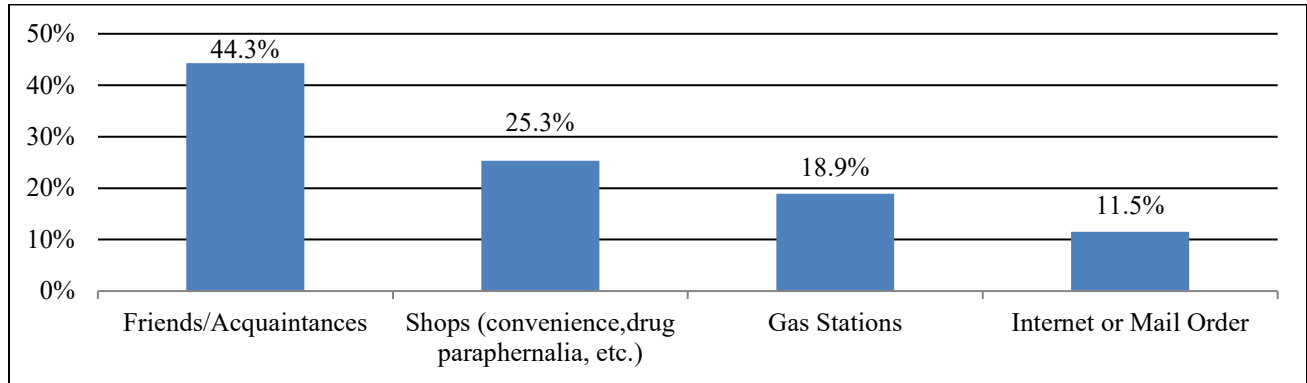
Gender and Race/Ethnicity

- Among marijuana users, men were somewhat more likely than women to report lifetime use of synthetic marijuana (12% vs. 8%).
- There were few differences by race/ethnicity, with 10% of both Whites and African Americans and 7% of Hispanics reporting lifetime use.

G1b. Sources of Synthetic Marijuana (Figure 3-17)

- When asked to report their usual source of synthetic marijuana, the most frequently-mentioned single source was family and friends (44%). Fifty-six percent, however, reported purchasing it legally from convenience stores and other shops (25%), gas stations (19%) and internet or mail order outlets (12%).

Figure 3-17: Usual Source of Synthetic Marijuana: Synthetic Marijuana Users



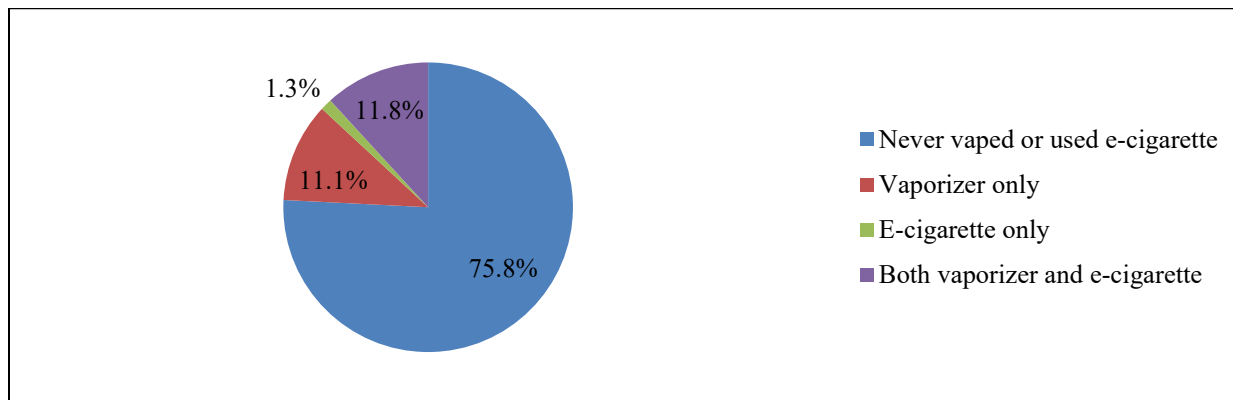
G2. Modes of Marijuana Use: Vaporizers and E-Cigarettes (Figure 3-18)

In this section we examine the extent to which marijuana users are using electronic cigarettes or vaporizers to smoke marijuana, given the increasing popularity of these devices for both nicotine and marijuana delivery. As described in Chapter IV: Nicotine, the Federal Drug Administration (FDA) classifies vaporizers, vape pens, hookah pens, electronic cigarettes (E-Cigarettes), and e-pipes as Electronic Nicotine Delivery Systems (ENDS). These products use liquid containing nicotine, as well as varying flavorings and other ingredients, which are heated into an aerosol that the user inhales. While these products were primarily designed for nicotine delivery, many can also be used for vaporizing marijuana. In 2016, the FDA finalized a rule extending regulatory authority to cover vaporizers, electronic cigarettes and all other ENDS products.

Because of the low number of synthetic marijuana users in the sample, in this section we examine the use of vaporizers and e-cigarettes for vaporizing natural marijuana only.

- Altogether, about 24% of marijuana users report ever having used a vaporizer or e-cigarette to smoke natural marijuana.
- About 11% of all users have used vaporizers only, 12% have used both vaporizers and e-cigarettes and about 1% have used e-cigarettes only.

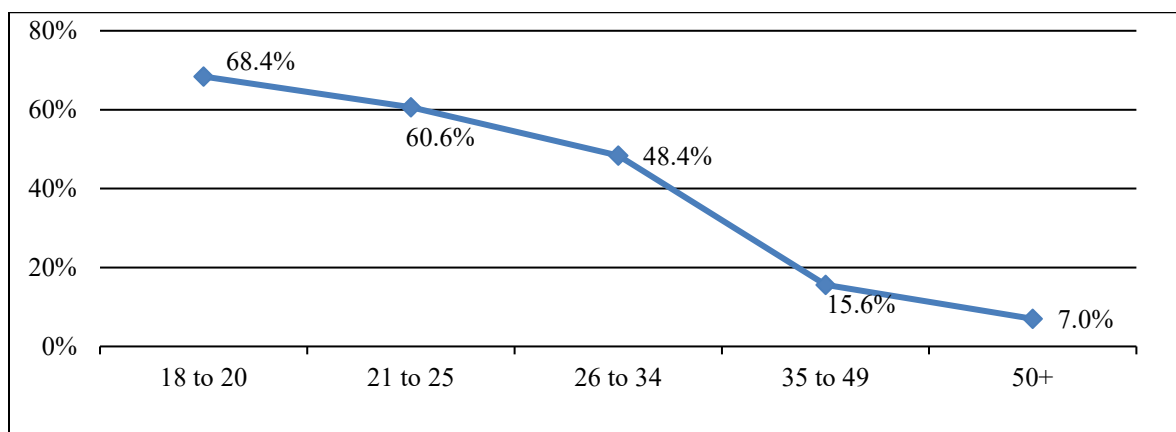
Figure 3-18: Proportion of Marijuana Users Who Ever Used a Vaporizer or E-Cigarette to Smoke Natural Marijuana



G2a. Characteristics of Users of Vaporizers or E-Cigarettes for Smoking Marijuana: Gender, Age and Race/Ethnicity Age (Figure 3-19)

- Age represented the most notable demographic trend in the vaping of marijuana, with the majority of users of vaporizers and e-cigarettes being found among those under the age of 35.
- Among marijuana users, the highest proportion of those who used vaporizers or e-cigarettes to smoke marijuana occurred among those under age 21, with 68% of 18-20 year olds reporting vaping marijuana. Similarly, vaping was reported by 61% of 21-25 year olds and 48% of 26 to 34 year olds.
- After age 34, the proportion of marijuana users who vaped dropped substantially, falling to 16% of 35-49 year olds and 7% of those over the age of 50.

Figure 3-19: Use of Vaporizers or E-Cigarettes to Smoke Marijuana, by Age: Lifetime Marijuana Users



Gender and Race/Ethnicity

- By gender, about 27% of male and 20% of female lifetime marijuana users reported vaping marijuana.
- Among lifetime marijuana users, the prevalence of vaping was similar among Whites (23%) and African Americans (24%), but substantially lower among Hispanics (14%).

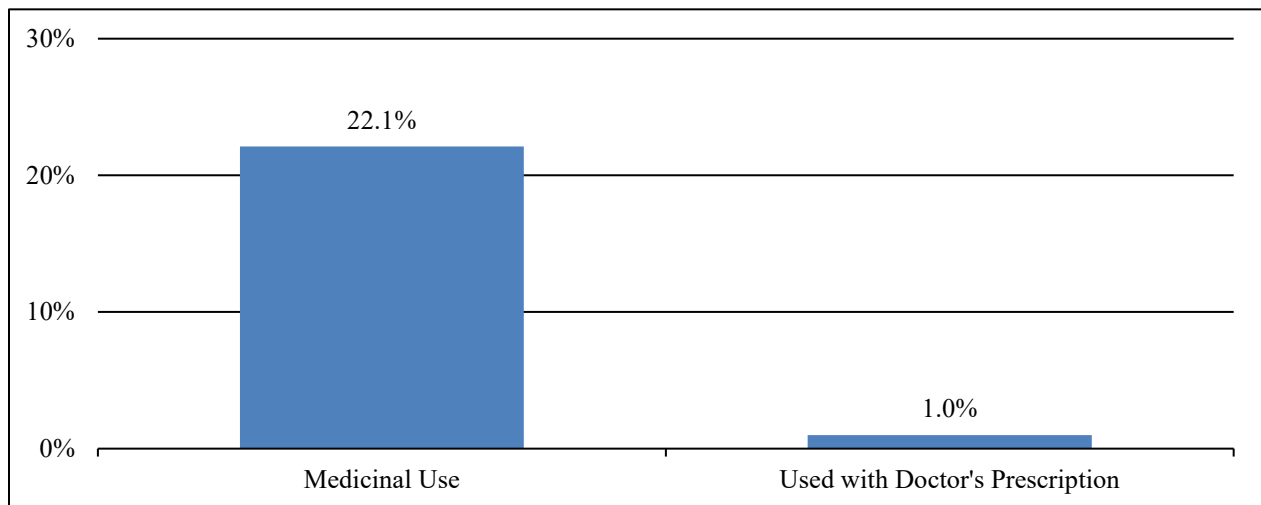
G3. Medicinal Marijuana Use: Prevalence and Characteristics of Users

This section focuses on the medicinal use of marijuana, with or without a doctor's prescription. Survey questions on this topic asked respondents if they had ever used marijuana for medicinal purposes to help them with a health problem.

G3a. Prevalence, Physician Prescription and Time Frames of Use

- About 22% of all marijuana users reported having ever used the drug medicinally (Figure 3-20). Only 1%, however, reported using it under a doctor's prescription.
- Among those reporting self-described medicinal use, 73% had used it medicinally in the last 12 months and 41%, in the last 30 days.

Figure 3-20: Use of Medicinal Marijuana: Lifetime Marijuana Users

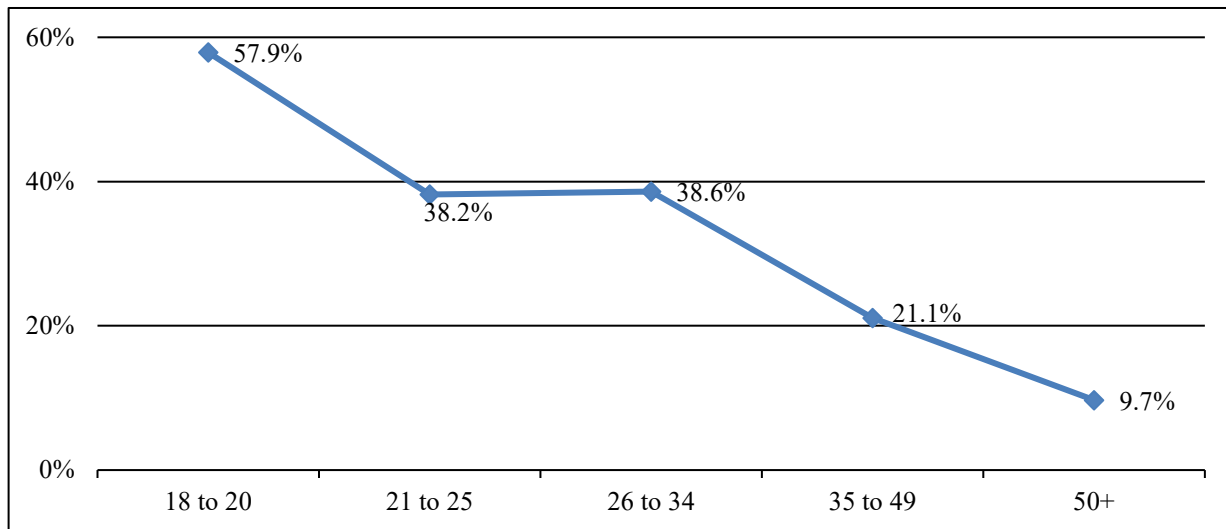


G3b. Demographic Characteristics of Users: Age, Gender and Race/Ethnicity Age (Figure 3-21)

- Age was highly associated with the medical use of marijuana, with most medicinal use occurring among those under age 35.

- About 58% of 18-20 year olds, 38% of 21-25 year-olds and 39% of 26 to 34 year olds reported having ever used marijuana to treat a health problem.
- After age 34, prevalence of medicinal use dropped to 21% of 35-49 year olds and 10% of those aged 50 and older

Figure 3-21: Use of Marijuana Medicinally, by Age: Lifetime Marijuana Users



Gender and Race/Ethnicity

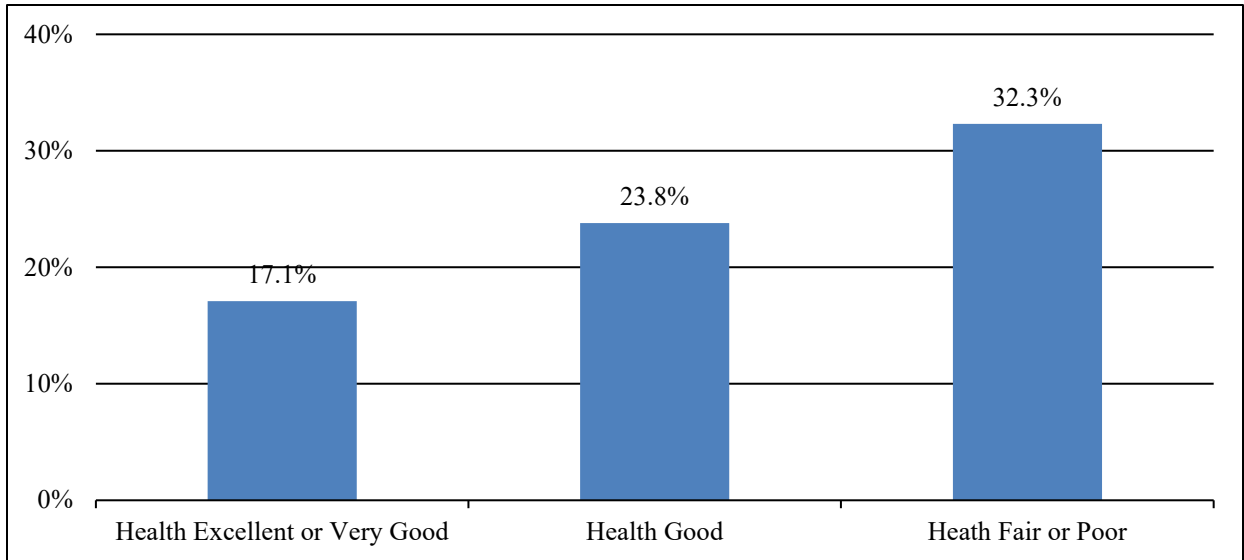
- Men were more likely to report medicinal use than women, with 26% of men vs. 17% of women reporting marijuana use to treat a health problem.
- By race/ethnicity, African Americans reported the highest prevalence of medicinal use (29%), followed by 21% of Whites and 12% of Hispanics.

G3c. Medicinal Marijuana Use and Physical and Mental Health Status

Physical Health Status (Figure 3-22)

- Use of marijuana for medicinal purposes was associated with self-reported physical health status among lifetime marijuana users, with medicinal use tending to increase as self-reported health declined.
- Among those who reported their health as excellent or very good, 17% reported medicinal use. This proportion nearly doubled, however, among those reporting fair or poor health, with 32% in the poorest health category reporting medicinal use.

Figure 3-22: Medicinal Marijuana Use by Self-Rated Physical Health Status: Lifetime Marijuana Users

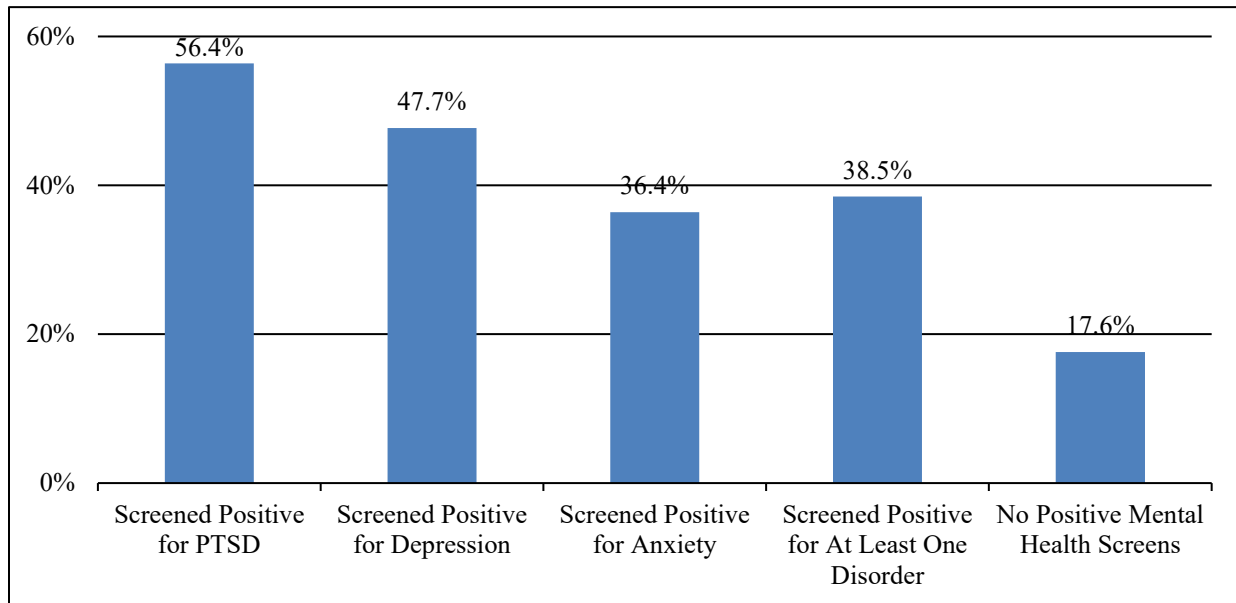


Mental Health Status (Figure 3-23)

This section examines the use of marijuana medicinally by individuals who screened positive in the current survey for a mental health disorder. As explained in greater detail in Chapter 7: Mental Health, respondents were administered three standardized screening instruments to screen for symptoms of anxiety, depression and PTSD. While a positive result on these screening tests did not indicate the presence of a clinical disorder, it did indicate the presence of symptoms requiring further clinical evaluation.

- There was a strong association between the medicinal use of marijuana and screening status for mental health problems, with those screening positive for a mental health disorder being two to three times more likely to report medicinal use than those with no positive screens.
- Among those with no positive mental health screens, 18% reported having ever used marijuana medicinally. In contrast, 39% of those screening positive for at least one mental health disorder reported medicinal use.
- Medicinal use of marijuana was highest among marijuana users who screened positive for PTSD, with 56% reporting medicinal use. Marijuana users with positive depression screens were next in prevalence of medicinal use (48%), followed by marijuana users screening positive for anxiety (36%).

Figure 3-23: Lifetime Use of Medical Marijuana by Mental Health Screening Status: Lifetime Marijuana Users



CHAPTER 4

NICOTINE

A. INTRODUCTION

The focus of this chapter is on the use of nicotine products, with a primary emphasis on cigarettes, which far surpass other nicotine products in their prevalence of use. The report also focuses on the use of electronic cigarettes (or e-cigarettes), which have become increasingly popular in New Jersey and elsewhere. The Federal Drug Administration classifies electronic cigarettes (E-Cigarettes), along with vaporizers, vape pens, hookah pens and e-pipes, as Electronic Nicotine Delivery Systems (ENDS). These products use a liquid containing nicotine, as well as flavorings and other ingredients, which are heated into an aerosol that the user inhales. Some e-cigarettes, however, only contain flavors and various other ingredients, but not nicotine.

The chapter presents an overview of the use of all nicotine products in the previous year. It then provides more specific information on the timeframes during which New Jersey adults have smoked tobacco and used electronic cigarettes, their frequency and quantity of use, the demographic characteristics of tobacco smokers and electronic cigarette users and reasons reported for initiating the use of e-cigarettes. Also examined in this chapter are the age of first tobacco and e-cigarette use and the relationship between age of first tobacco cigarette use and frequency and quantity of current tobacco cigarette use. For the purpose of this report, the following definitions are used to define tobacco cigarette smokers:

Lifetime Smoker:	Smoked 100 or more cigarettes in lifetime.
Current Smoker:	Smoked at least one cigarette in the last 30 days.
Daily Smoker:	Smoked at least one cigarette per day in the last 30 days.
Heavy Smoker:	Smoked a pack (20 cigarettes) per day or more in the last 30 days.

With respect to e-cigarettes, users are considered to have used daily, in the last 30 days and in their lifetimes if they used at least one e-cigarette during each of those time periods. We do not specify a definition of heavy use for e-cigarettes.

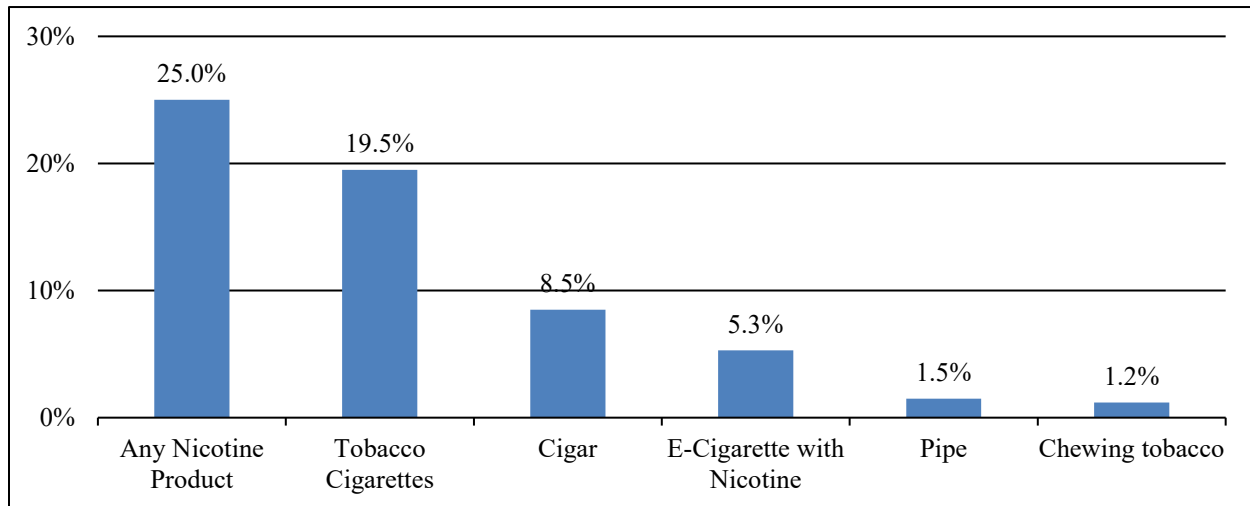
B. OVERVIEW OF THE USE OF NICOTINE PRODUCTS BY NEW JERSEY RESIDENTS

B1. All Nicotine Products Used in Past Year (Figure 4-1)

- About 25% of all New Jersey residents had used a nicotine product in the previous 12 months.

- Cigarettes were the most frequently used product by far, with 20% reporting their use in the last year. Nine percent of state residents smoked cigars, 5% used e-cigarettes containing nicotine, 2% smoked a pipe and 1% used chewing tobacco.

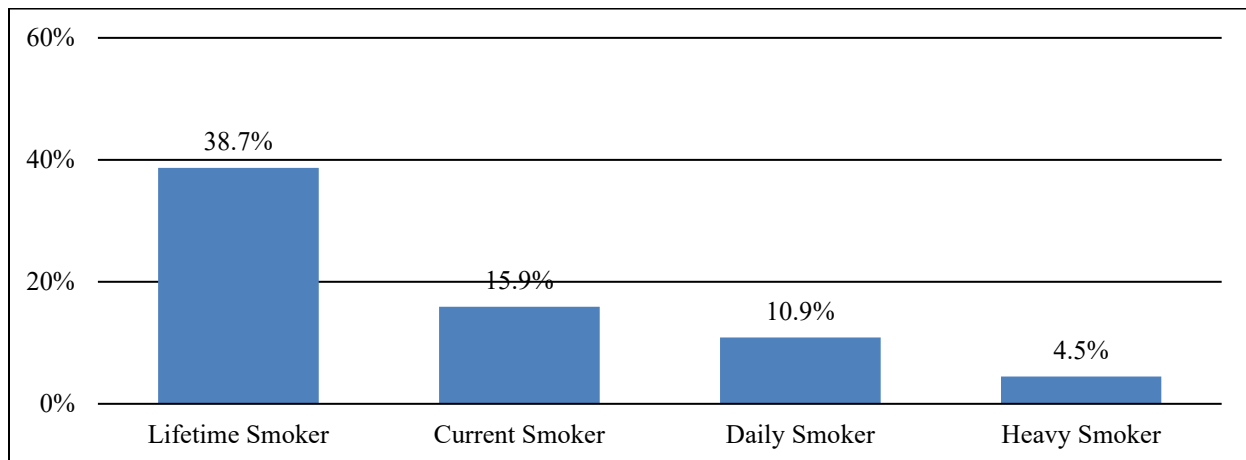
**Figure 4-1: Use of Nicotine Products in the Last 12 Months, by Type of Product:
New Jersey Residents**



B2. Tobacco Cigarettes: Prevalence, Frequency and Quantity of Use (Figure 4-2)

- Among all New Jersey residents, 39% had smoked at least 100 cigarettes in their lifetimes. Only 16%, however, were current smokers and 11%, daily smokers.
- About 5% of all New Jersey residents were heavy smokers.

Figure 4-2: Prevalence, Time Frames and Quantity of Cigarette Use: New Jersey Residents



C. TOBACCO CIGARETTE SMOKERS: DEMOGRAPHIC CHARACTERISTICS OF USERS AND PATTERNS OF USE

C1. Demographic Characteristics of Current and Daily Smokers

Gender, Age, Race/Ethnicity and Birthplace (Table 4-1)

- Males were almost twice as likely as females to be current smokers (21% vs. 11%) and daily smokers (14% vs. 8%).
- By age, residents aged 21-25 reported the highest rate of current smoking (26%) followed by residents aged 26-34 (23%). About 16% each of residents aged 18-20 and 35-49 were current smokers. Those aged 50 and above were the least likely of all residents to be current smokers (12%).
- Residents aged 26-34 were the most likely of all age groups to smoke daily (16%). About 12% of those aged 18-20 and 21-25 and 10% of those aged 35-49 and 50 and older smoked daily.
- Rates of current smoking were similar among most racial/ethnic groups - Whites (17%), African Americans (16%) and Hispanics (14%). Asians, however, were substantially less likely than other racial/ethnic groups to currently smoke (8%).
- Whites were the most likely of all racial/ethnic groups to be daily smokers (13%), with about 9% of both African Americans and Hispanics smoking daily. Only 4% of Asians reported daily smoking.
- By birthplace, those born in the United States were more likely to be current smokers (18% vs. 12%) and to smoke daily (12% vs. 8%) than those born outside of the US.

Marital Status, Education, Employment and Income (Table 4-1)

- In terms of marital status, residents who were divorced or separated had the highest rate of current smoking (28%) and daily smoking (18%), followed by those who were never married (22% and 12%, respectively). Twelve percent of married residents reported current smoking and 9%, daily smoking. Those who were widowed had the lowest rate of current smoking (8%) and daily smoking (8%).

- By education, college graduates were the least likely of all educational groups to report current smoking (9%) or daily smoking (4%). Although equivalent rates of current smoking were reported by the other educational groups (19%-20%), residents who did not finish high school had the highest rate of daily smoking (19%), followed by those with some college (15%) and high school graduates (13%).

Table 4-1: Proportion of New Jersey Residents Who Were Current and Daily Smokers of Tobacco Cigarettes, by Demographic Characteristics

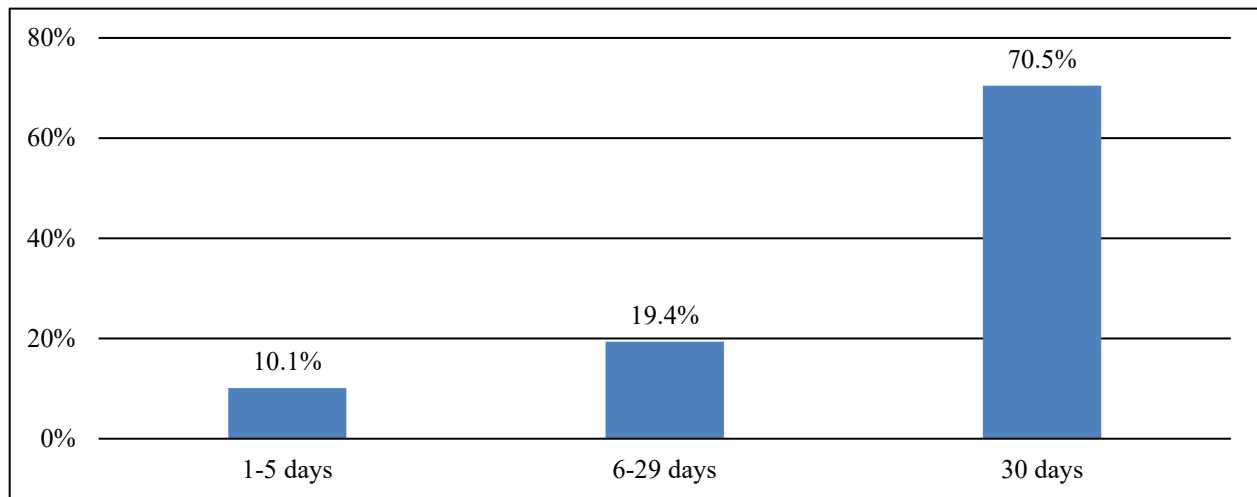
Demographics			Current Smokers (%)	Daily Smokers (%)
New Jersey Total Population (n=1052)			15.9	10.9
Gender	Males	(n=504)	21.0	14.3
	Females	(n=547)	11.2	7.8
Age	18-20	(n=67)	16.4	11.9
	21-25	(n=78)	25.6	11.5
	26-34	(n=147)	23.1	16.3
	35-49	(n=278)	16.2	10.4
	50+	(n=463)	12.3	9.7
Race/ Ethnicity	White	(n=631)	17.4	12.9
	Black	(n=135)	15.6	8.9
	Hispanic	(n=180)	13.9	9.4
	Asian	(n=80)	7.5	3.8
Born in U.S.	Yes	(n=764)	17.7	11.9
	No	(n=287)	11.5	8.4
Marital Status	Married	(n=594)	11.6	9.2
	Never Married	(n=279)	21.5	11.9
	Divorced/Sep.	(n=110)	28.2	18.2
	Widowed	(n=59)	8.5	8.3
Education	Less than H.S.	(n=120)	19.2	19.2
	H.S. Grad.	(n=298)	19.1	13.0
	Some College	(n=273)	20.1	14.7
	College Grad.	(n=360)	9.2	3.9
Employment Status	Employed Full-Time	(n=509)	17.9	11.2
	Employed Part-time	(n=166)	9.6	6.6
	Unemployed	(n=35)	23.2	17.9
	Retired/Disabled	(n=213)	16.0	11.7
Income	Under \$25,000	(n=172)	19.8	14.5
	\$25,000-49,999	(n=150)	20.7	12.7
	\$50,000-79,999	(n=172)	18.6	16.3
	\$80,000-99,999	(n=106)	17.9	12.3
	\$100,000 and over	(n=285)	10.9	4.6

- By employment status, part-time workers were the least likely to report current smoking (10%) or daily smoking (7%). In contrast, unemployed residents had the highest rates of both current (23%) and daily (18%) smoking. About 18% of full-time workers and 16% of the retired or disabled were current smokers, and 11% and 12%, respectively, smoked daily.
- By income, those in the highest income group (\$100,000 or more) had the lowest rates of both current (11%) and daily (5%) smoking. Prevalence of current smoking was comparable across all remaining income groups, ranging from 18% among those earning \$80,000-\$99,999 to 21% among those earning \$25,000-\$49,999. Similarly, daily smoking ranged from 12% of those earning \$80,000-\$99,999 to 16% of those earning \$50,000 to \$79,999.

C2. Frequency and Quantity of Use: Current Smokers

- Most current smokers (71%) smoked cigarettes every day in the past 30 days (Figure 4-3). About 10% of current smokers smoked on one to five days during the previous month and 19% smoked on 6 to 19 days.

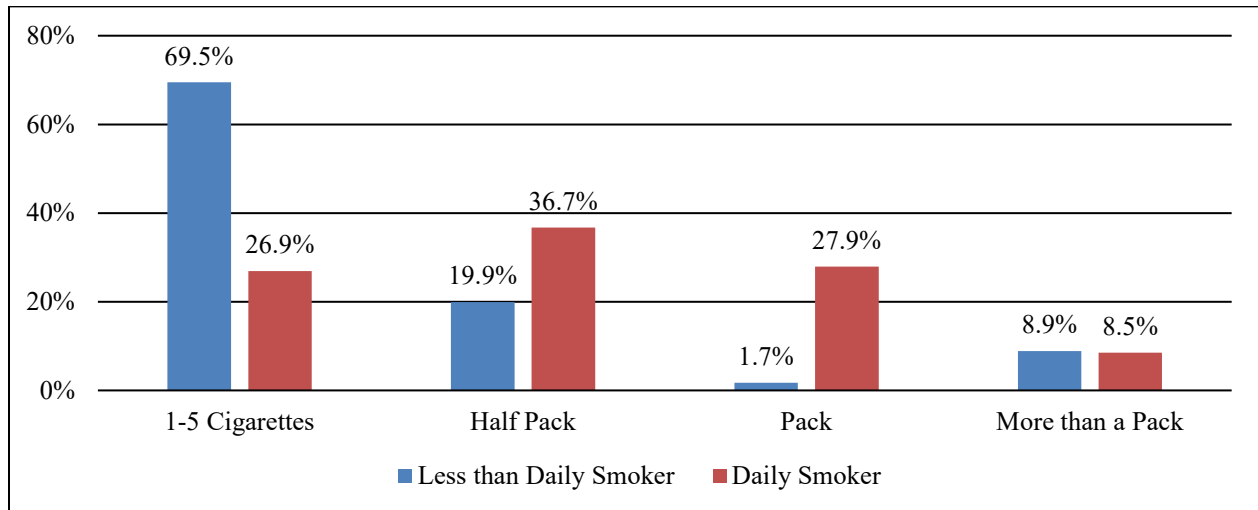
Figure 4-3: Frequency of Tobacco Cigarette Use in the Last 30 Days: New Jersey Current Smokers



- Overall, daily smokers smoked more cigarettes per day than smokers who did not smoke daily (Figure 4-4). On the days they smoked, 70% of non-daily smokers and 27% of daily smokers reported smoking one to five cigarettes, while 20% of non-daily smokers and 37% of daily smokers averaged half a pack per day.

- Daily smokers were substantially more likely than smokers who smoked less than daily to smoke a pack of cigarettes on days they smoked (28% vs. 2%); however, about equal proportions of daily and non-daily smokers smoked more than a pack per day (8%-9%).

Figure 4-4: Quantity of Cigarettes Smoked by Type of Smoker: New Jersey Current Smokers

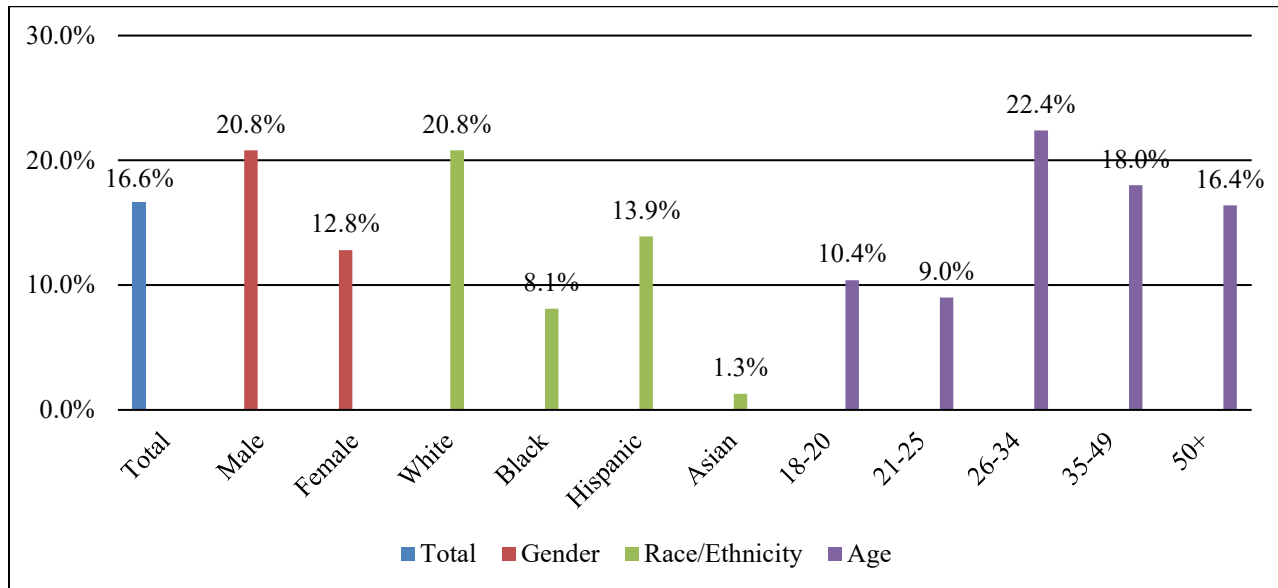


D. EARLY CIGARETTE USE (BY AGE 14)

D1. Prevalence of Early Smoking: New Jersey Residents (Figure 4-5)

- Altogether, 17% of New Jersey residents smoked cigarettes before the age of 15. An additional 17% initiated smoking between the ages of 15 and 17, and 11%, between the ages of 18 and 20. Only 6% of all residents first smoked a cigarette after age 20. The remaining 49% never initiated smoking.

Figure 4-5: Prevalence of Early Smoking (by Age 14) by Gender, Race/Ethnicity and Current Age: New Jersey Residents

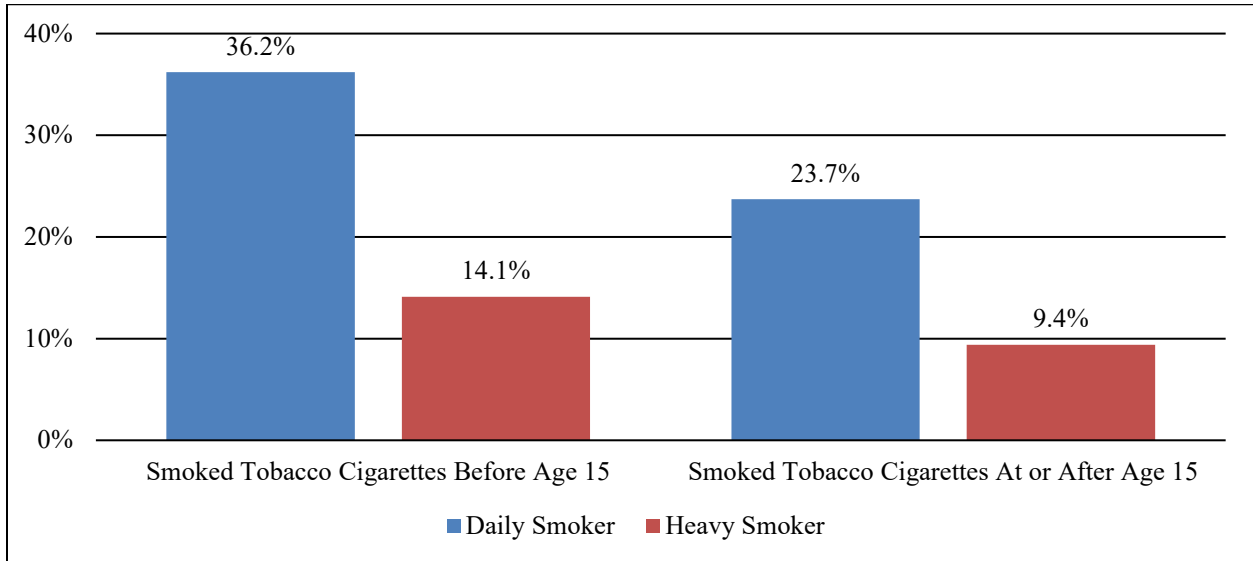


- Early smoking was more prevalent among males than females (21% vs. 13%).
- By race/ethnicity, White residents had the highest prevalence of early smoking (21%), followed by Hispanics (14%) and African Americans (8%). Asians were the least likely of all racial/ethnic groups to smoke before the age of 15 (1%).
- By age, smoking before the age of 15 was most prevalent among residents currently aged 26-34 (22%) and least prevalent among those now aged 21-25 (9%) and 18-20 (10%). Early smoking was reported by 18% of 35-49 year olds and 16% of those aged 50 and older.

D2. Relationships between Early Smoking and Frequency and Quantity of Current Smoking: Lifetime Cigarette Smokers (Figure 4-6)

- Among early smokers, 36% reported daily smoking and 14%, heavy smoking. In contrast, among those initiating smoking at or after age 15, 24% reported daily smoking and 9%, heavy smoking.

Figure 4-6: Frequency and Quantity of Current Tobacco Cigarette Smoking by Age of First Tobacco Cigarette Use: Lifetime Tobacco Smokers

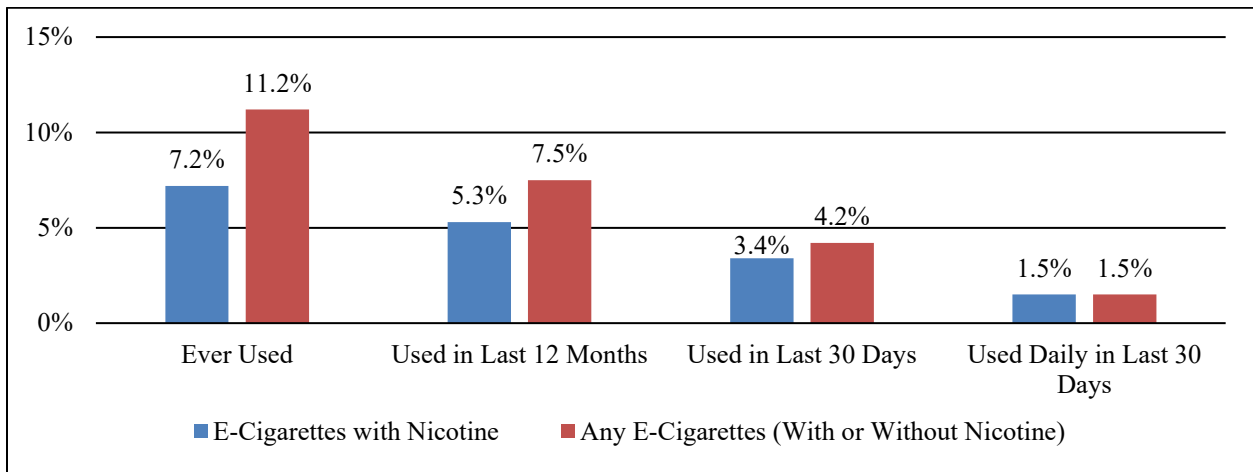


E. OVERVIEW OF E-CIGARETTE USE: TRENDS IN USE AND DEMOGRAPHIC CHARACTERISTICS OF USERS

E1. Overall Prevalence and Frequency of Use: New Jersey Residents (Figure 4-7)

- Among all New Jersey residents, 11% used at least one e-cigarette in their lifetime and 7% used e-cigarettes containing nicotine. In the last 12 months, 8% used e-cigarettes and 5% used e-cigarettes with nicotine. In the last month, only 4% used an e-cigarette and 3% used e-cigarettes containing nicotine.
- Only 2% of residents used e-cigarettes with or without nicotine daily.

Figure 4-7: Prevalence and Frequency of E-Cigarette Use: New Jersey Residents



E2. Demographic Characteristics of Lifetime E-Cigarette Users: Gender, Age and Race/Ethnicity (Table 4-2)

- Males were more likely than females to have used any type of e-cigarette in their lifetime (14% vs. 9%) and to use e-cigarettes with nicotine (9% vs. 6%).
- The majority of e-cigarette users in New Jersey were under the age of 34. Thus, 17% of 18-20 year olds, 28% of 21-25 year olds and 27% of 26-34 year olds had used an e-cigarette of any type. In contrast, only 10% of residents 35-49 and 4% of residents age 50 and older had used any type of e-cigarette.
- Although 18-20 year olds were high users of e-cigarettes (17%), only 9% reported ever using an e-cigarette with nicotine. In contrast, 26% of 21-25 year olds and 16% of 26-34 year olds had used e-cigarettes containing nicotine. Among residents over age 34, only 4% of 35-49 year olds and 3% of those over age 50 had used e-cigarettes with nicotine.
- By race/ethnicity, African Americans were the least likely of all racial/ethnic groups to have used e-cigarettes, with only 6% reporting any use and 3%, use of e-cigarettes with nicotine. Whites and Hispanics reported the highest use of any e-cigarettes (12% and 13%, respectively), but Whites were more likely than Hispanics to use e-cigarettes with nicotine (9% vs. 4%). About 11% of Asians used any type of e-cigarette and 6% used e-cigarettes with nicotine.

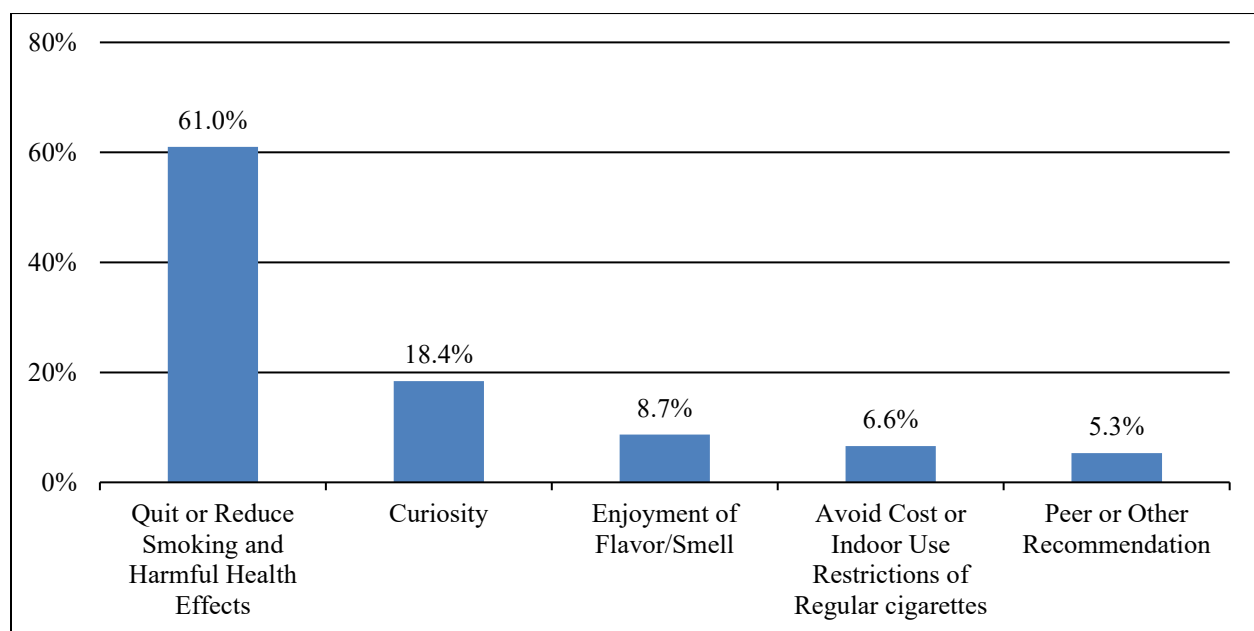
Table 4-2: Proportion of E-Cigarette Users by Type of E-Cigarette: New Jersey Residents

Demographics		Proportion Who Used Any E-Cigarettes in Their Lifetimes (%)	Proportion Who Used E-Cigarettes <i>with Nicotine</i> in Their Lifetimes (%)
New Jersey Total Population (n=1052)		11.2	7.2
Gender	Males (n=505)	13.9	9.3
	Females (n=547)	8.8	5.5
Age	18-20 (n=66)	16.7	9.1
	21-25 (n=79)	27.8	25.6
	26-34 (n=147)	26.5	16.3
	35-49 (n=278)	10.4	4.3
	50+ (n=464)	3.7	2.8
Race/ Ethnicity	White (n=630)	12.4	9.4
	Black (n=135)	5.9	3.0
	Hispanic (n=181)	12.7	4.4
	Asian (n=80)	11.3	6.3

E3. Reasons for E-Cigarette Use, Overall and by Gender and Age (Figure 4-8)

- By far, the most common reason for the use of e-cigarettes was to quit smoking or reduce the harmful effects of tobacco smoking (61%).
- Other non-health related reasons cited by users of e-cigarettes included curiosity (18%), the flavor or smell of the product (9%), utilitarian reasons, such as avoiding the cost of tobacco cigarettes or the restrictions placed on indoor smoking of tobacco cigarettes (7%) and recommendations from peers or others to try the product (5%).

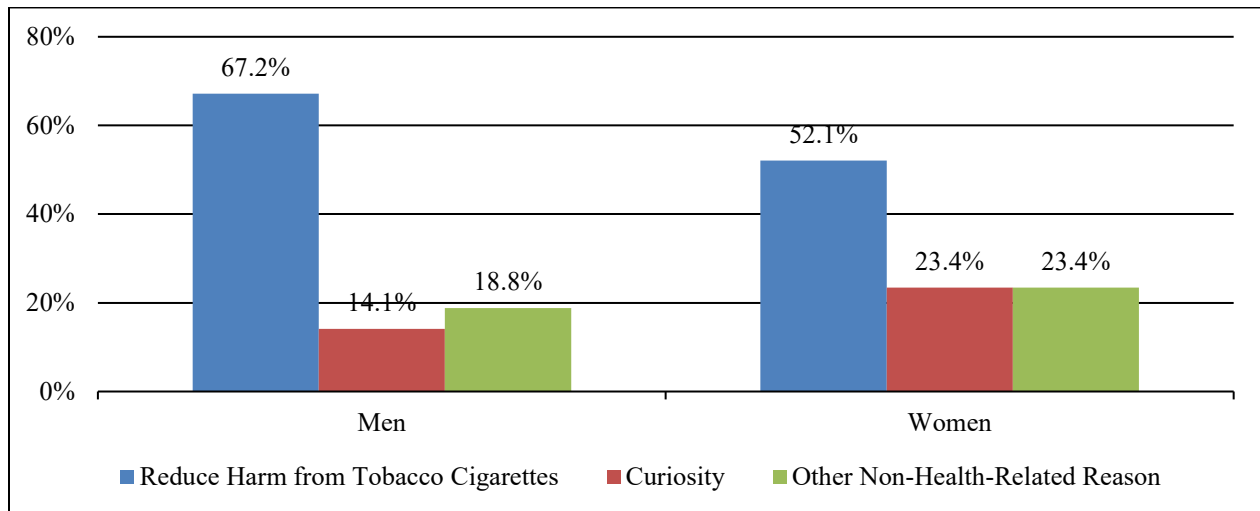
Figure 4-8: Main Reason for First E-Cigarette Use: Lifetime Users of Nicotine and Non-Nicotine E-Cigarettes



Gender and Age

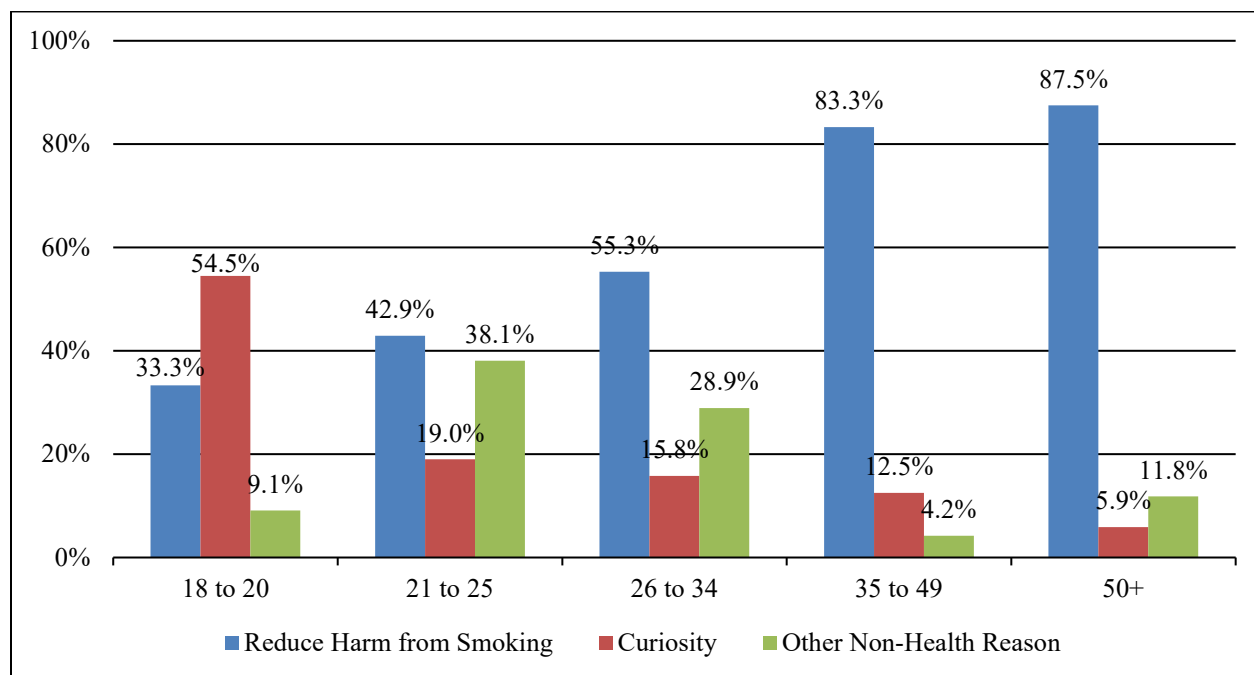
- By gender (Figure 4-9), men were substantially more likely than women to have used e-cigarettes to avoid the harmful health effects of smoking (67% vs. 52%). Women, in contrast, were more likely than men to have used e-cigarettes out of curiosity (23% vs. 14%). Similarly, 23% of women compared to 19% of men, used e-cigarettes for the other non-health-related reasons described above.

Figure 4-9: Reasons for Use of E-Cigarettes, by Gender: Lifetime E-Cigarette Users



- Overall, health-related reasons for the initiation of e-cigarette use showed a consistent increase with increases in age (Figure 4-10). While only 33% of 18-20 year olds reported health as their primary reason for use, health reasons are mentioned by 43% of 21-25 year olds, 55% of 26-34 year olds, 83% of 35-49 year olds, and 88% of those 50 and older.
- Curiosity as a reason for use, in contrast, decreased steadily by age. In the 18-20 year old age group, 55% cited curiosity as the dominant reason for first use. This percentage declined to 19% among 21-25 year olds, 16% among 26-34 year olds, 13% among 35-49 year olds and 6% among those 50 and over.
- Other non-health related reasons were most frequently cited among residents aged 21-25 (38%) and 26 to 34 (29%). In contrast, only 9% of those aged 18-20, 4% of those aged 35-49 and 12% of those aged 50 and over cited other non-health related reasons for use.

Figure 4-10: Reasons for Use of E-Cigarettes, by Age: Lifetime E-Cigarette Users

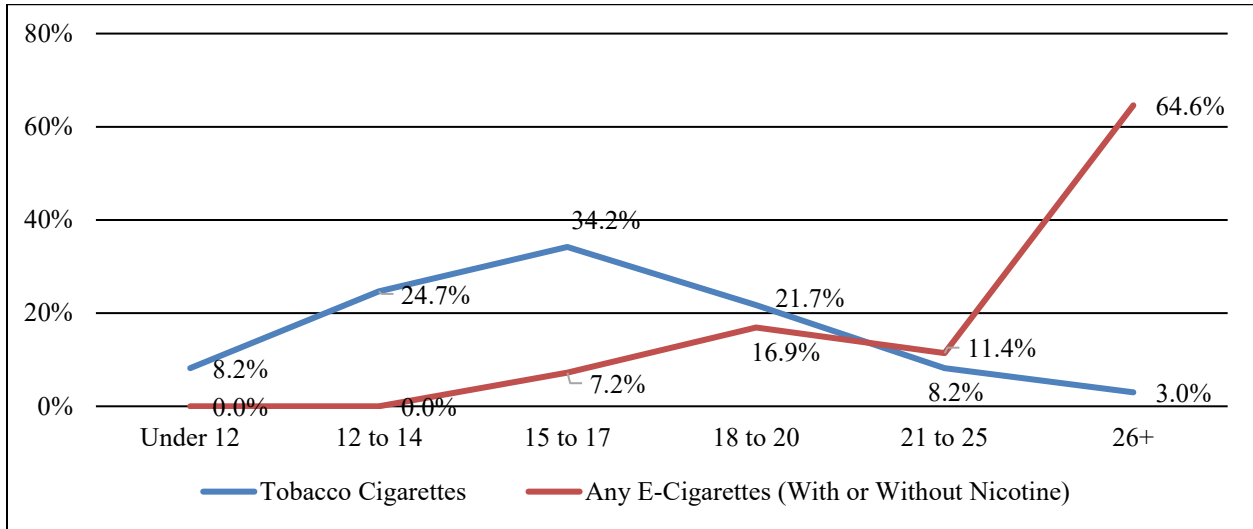


F. TOBACCO CIGARETTES AND E-CIGARETTES: AGE OF FIRST USE AND RELATIONSHIPS BETWEEN CIGARETTE SMOKING AND E-CIGARETTE USE

F1. Age of First Use (Figure 4-11)

- Among tobacco cigarette smokers, most (67%) initiated use prior to age 17 and 33% smoked their first cigarette prior to age 15. In contrast, no e-cigarette users initiated use before age 15, with the majority (65%) reporting first use after age 25.
- The later initiation of e-cigarette use is likely to reflect the fact that e-cigarettes were introduced into the United States relatively recently (2006-2007). It is unclear whether residents will begin using these products at earlier ages as their use becomes more established.

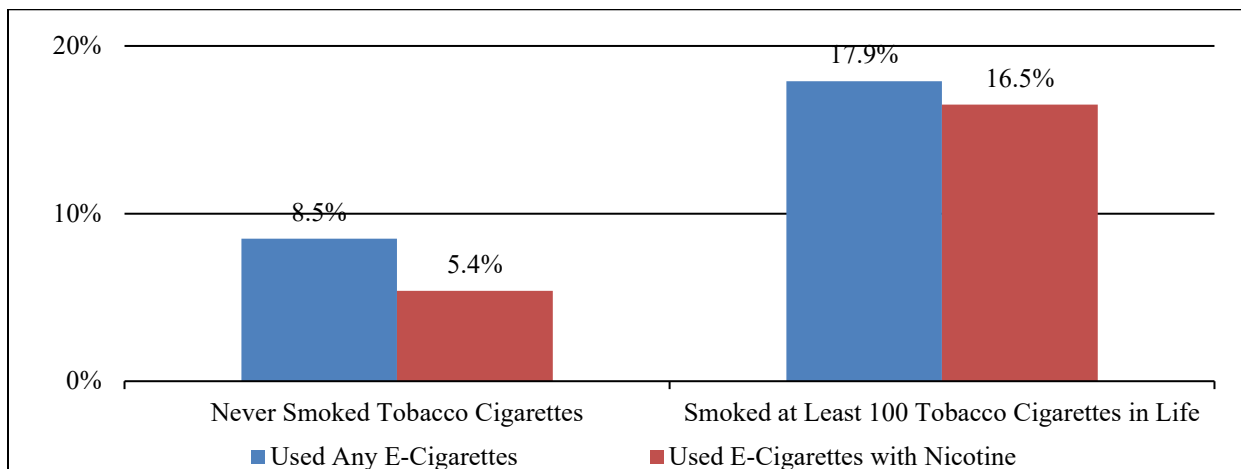
Figure 4-11: Age of First Use of Tobacco Cigarettes and E-Cigarettes: Lifetime Smokers and New Jersey Residents Who Ever Used E-Cigarettes



F2. Relationships between Cigarette Smoking and E-Cigarette Use (Figure 4-12)

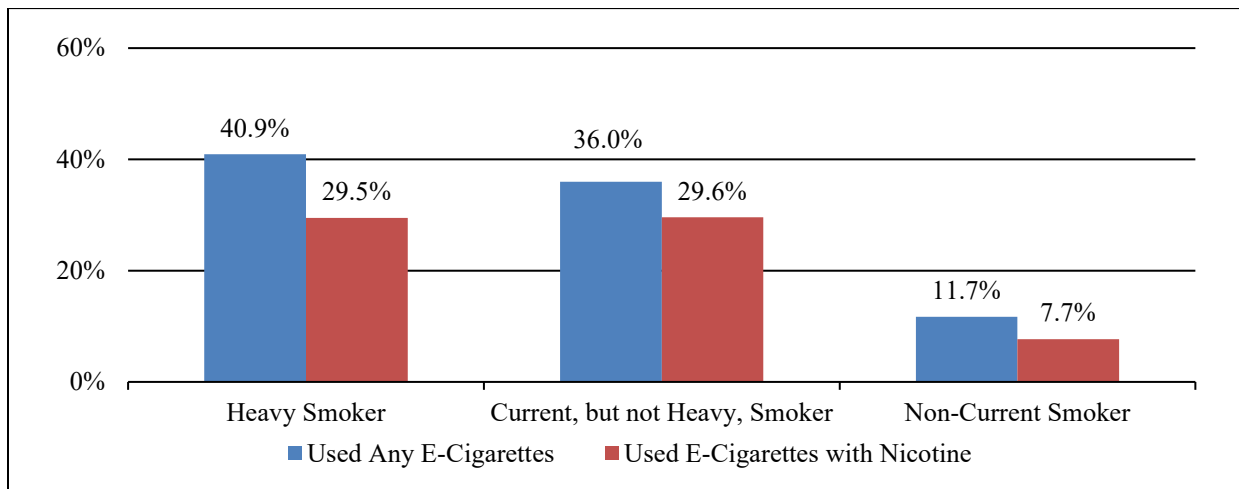
- In general, lifetime smokers were substantially more likely to use e-cigarettes than non-smokers, being more than twice as likely to use any type of e-cigarette and more than three times as likely to use e-cigarettes containing nicotine.
- Among non-smokers, only 9% had ever used an e-cigarette of any type, and only 5% had used an e-cigarette containing nicotine. Among residents who had smoked at least 100 cigarettes in their lifetimes, 18% had used e-cigarettes of any type and 17% had used e-cigarettes with nicotine.

Figure 4-12: Lifetime Use of E-Cigarettes, by Lifetime Tobacco Smoking Status: New Jersey Residents



- Among residents who had smoked at least 100 cigarettes in their lifetimes, however, those who smoked in the last 30 days and those who smoked heavily were much more likely to have used e-cigarettes than lifetime smokers who did not currently smoke (Figure 4-13).
- About 41% of heavy smokers and 36% of past 30-day smokers had used any type of e-cigarettes in their lifetimes. In contrast, only 12% of lifetime smokers who were not current smokers had ever used any type of e-cigarettes.
- Heavy and current smokers were equally likely to have used e-cigarettes with nicotine (about 30%). Only 8% of non-current smokers had used nicotine-containing e-cigarettes.

**Figure 4-13: Lifetime E-Cigarette Use by Smoking Status in the Last 30 Days:
Lifetime Tobacco Smokers**



CHAPTER 5

MULTIPLE SUBSTANCE USE AND ABUSE

A. INTRODUCTION

In this chapter, we examine the interrelationships between the use of alcohol, tobacco cigarettes and marijuana as well as relationships between the use of each of these substances and the use of other illicit drugs. We specifically focus on marijuana use in this chapter, since this is the most prevalent drug of abuse in New Jersey and elsewhere and the drug most frequently used at an early age.

The chapter first examines the extent to which current and heavy cigarette smokers, alcohol users and marijuana users are also current and heavy users of the other two substances. Next, we examine the use of other illicit drugs, including cocaine, heroin, hallucinogens, club drugs and the misuse of psychotherapeutic medications, by current and heavy users of alcohol, tobacco and marijuana. We also explore the extent to which users and heavy users of these three substances meet criteria for substance abuse or dependence. Finally, we examine the association between early use (before age 15) of alcohol, tobacco and marijuana and the subsequent heavy use of each substance as well as the subsequent development of substance abuse or dependence.

For the purpose of this report, heavy marijuana use is defined as use on 25 days or more out of the last 30.

B. INTERRELATIONSHIPS BETWEEN THE USE OF ALCOHOL, CIGARETTES AND MARIJUANA

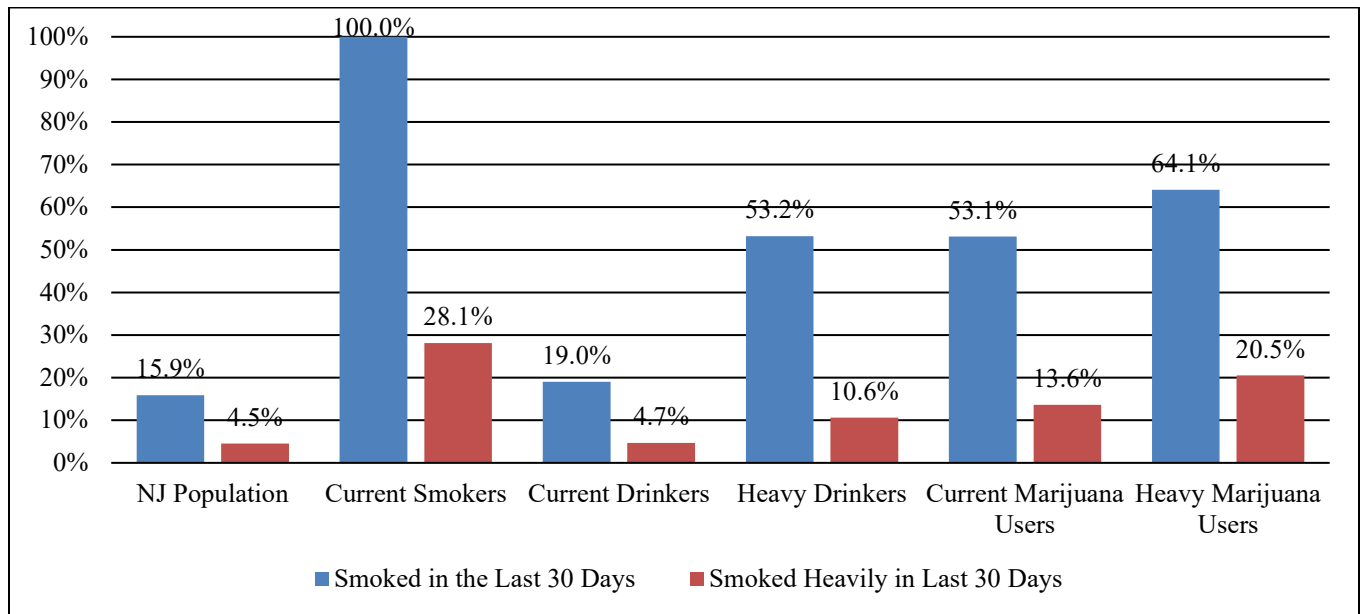
- There were strong interrelationships between the use of alcohol, cigarettes and marijuana, with users of one substance being more likely than the population as a whole to use each of the other substances.
- In general, marijuana users and heavy drinkers were the most likely to report current and heavy use of other substances. Current drinkers who did not drink heavily, however, were the least likely of all user groups to report other substance use.

Smoking (Figure 5-1)

- Current smoking was substantially higher among current and heavy marijuana users (53% and 64%, respectively) and heavy drinkers (53%) than in the New Jersey population as a whole (16%). Prevalence of current smoking among current drinkers (19%), however, was only slightly elevated over the general population rate.

- In terms of heavy smoking, the highest prevalence was found among current smokers (28%), followed by heavy marijuana users (21%), current marijuana users (14%) and heavy drinkers (11%). The prevalence of heavy smoking among current drinkers (5%), however, was comparable to the general population rate (5%).

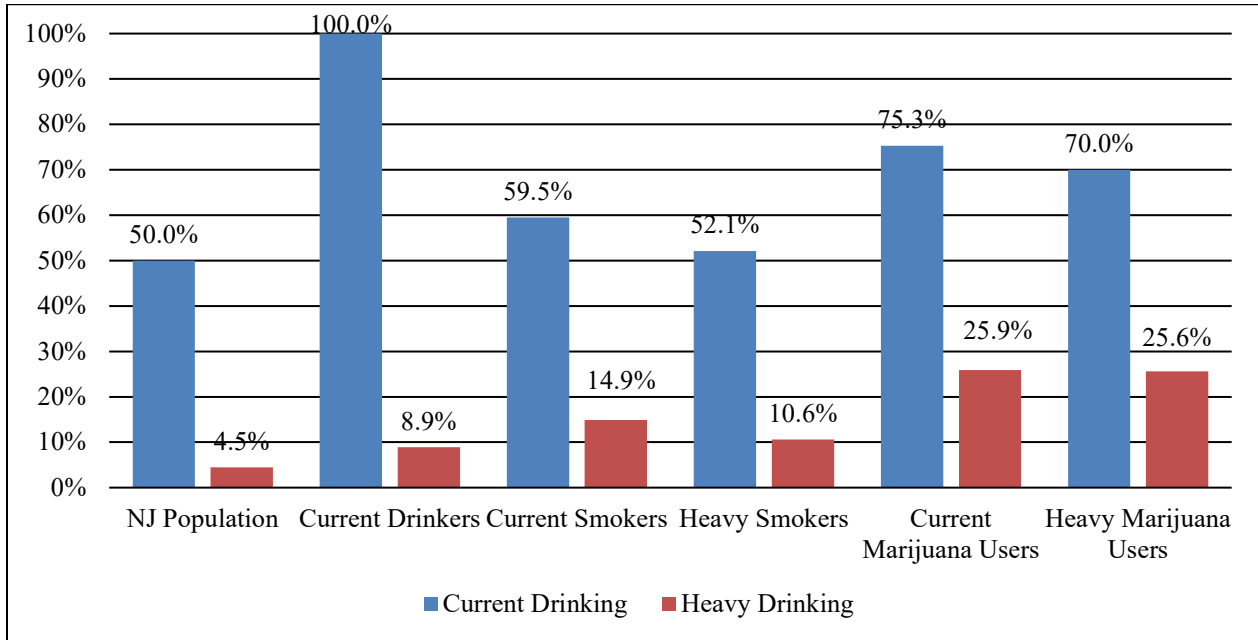
Figure 5-1: Prevalence of Current and Heavy Smoking in the New Jersey Population and Among Smokers, Drinkers and Marijuana Users



Alcohol Use (Figure 5-2)

- The highest rates of current drinking were found among current and heavy marijuana users (75% and 70%, respectively) and current smokers (60%). The rate of current drinking among heavy smokers (52%) was only slightly higher than the general population rate of 50%.
- Although current drinkers drank heavily at about twice the rate of the general population (9% vs. 5%), current alcohol users had lower rates of heavy drinking than current and heavy marijuana users (26% each) and current and heavy smokers (15% and 11%, respectively).

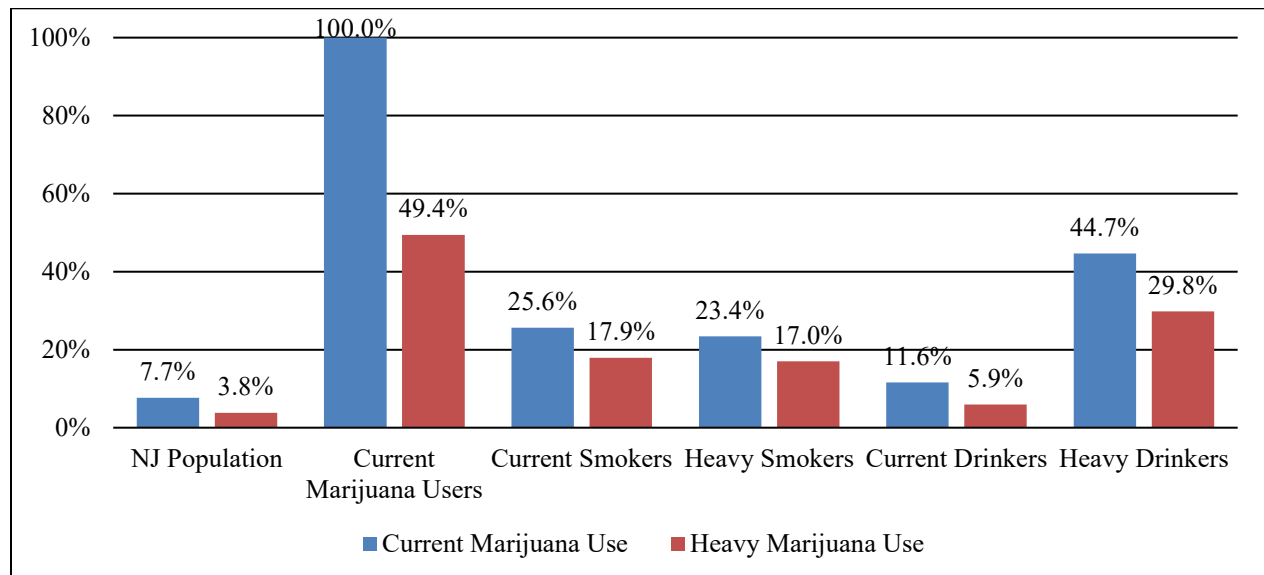
Figure 5-2: Prevalence of Current and Heavy Drinking in the New Jersey Population and Among Smokers, Drinkers and Marijuana Users



Marijuana Use (Figure 5-3)

- The highest prevalence of current marijuana use was found in heavy drinkers (45%) followed by current and heavy smokers (26% and 23%, respectively). About 12% of current drinkers used marijuana, somewhat higher than the general population rate of 8%.
- Current marijuana users were the most likely of all user groups to report heavy use, exceeding by more than 12 times the rate of heavy marijuana use in the general population (50% vs. 4%). High rates of heavy marijuana use, however, were also found among heavy drinkers (30%) and current and heavy smokers (18% and 17%, respectively).

Figure 5-3: Prevalence of Current and Heavy Marijuana Use in the New Jersey Population and Among Smokers, Drinkers and Marijuana Users

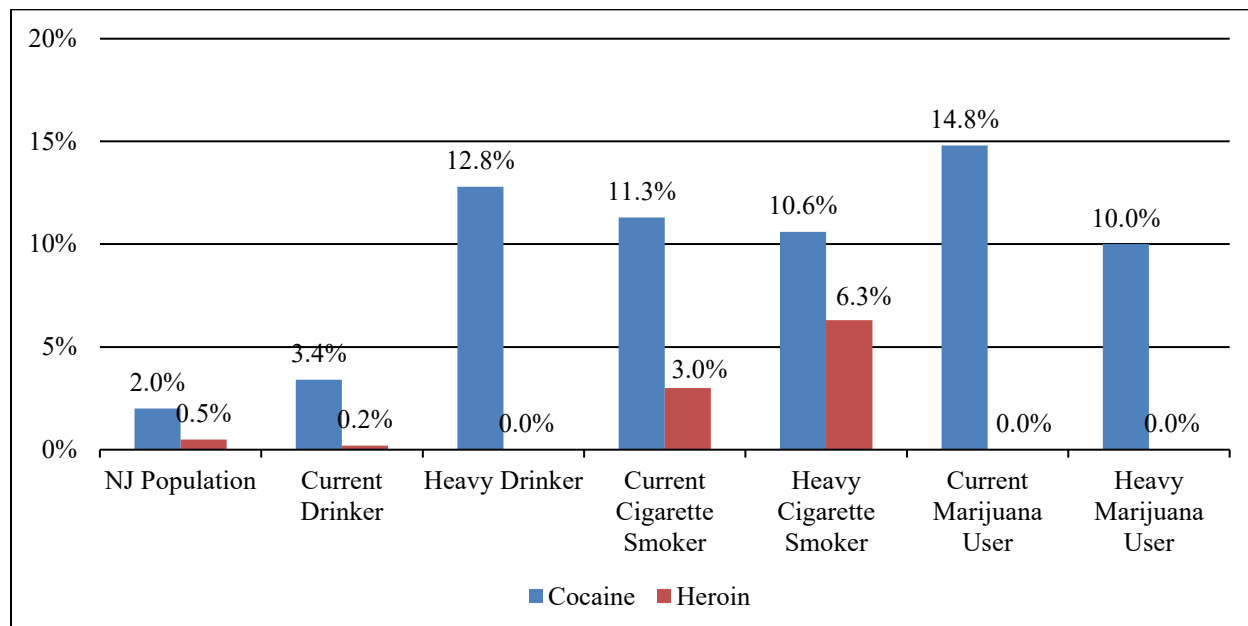


C. ALCOHOL, CIGARETTE AND MARIJUANA USE, THE USE OF OTHER ILLICIT DRUGS AND SUBSTANCE ABUSE/DEPENDENCE

Heroin and Cocaine (Figure 5-4)

- All user groups except current drinkers had substantially higher rates of cocaine use than the population as a whole. Heroin use, however, was elevated only among current and heavy smokers.
- Cocaine, which was used by about 2% of the general population, was used by about 15% of current marijuana users, 10% of heavy marijuana users, 13% of heavy drinkers, and 11% of current and heavy smokers. The proportion of current drinkers that used cocaine, however, was comparable to that in the general population (3%).
- Heroin was used by less than 1% of the general population in the past year and by less than 1% of all user groups except smokers. Three percent of current smokers, however, and 6% of heavy smokers reported using heroin in the last 12 months.

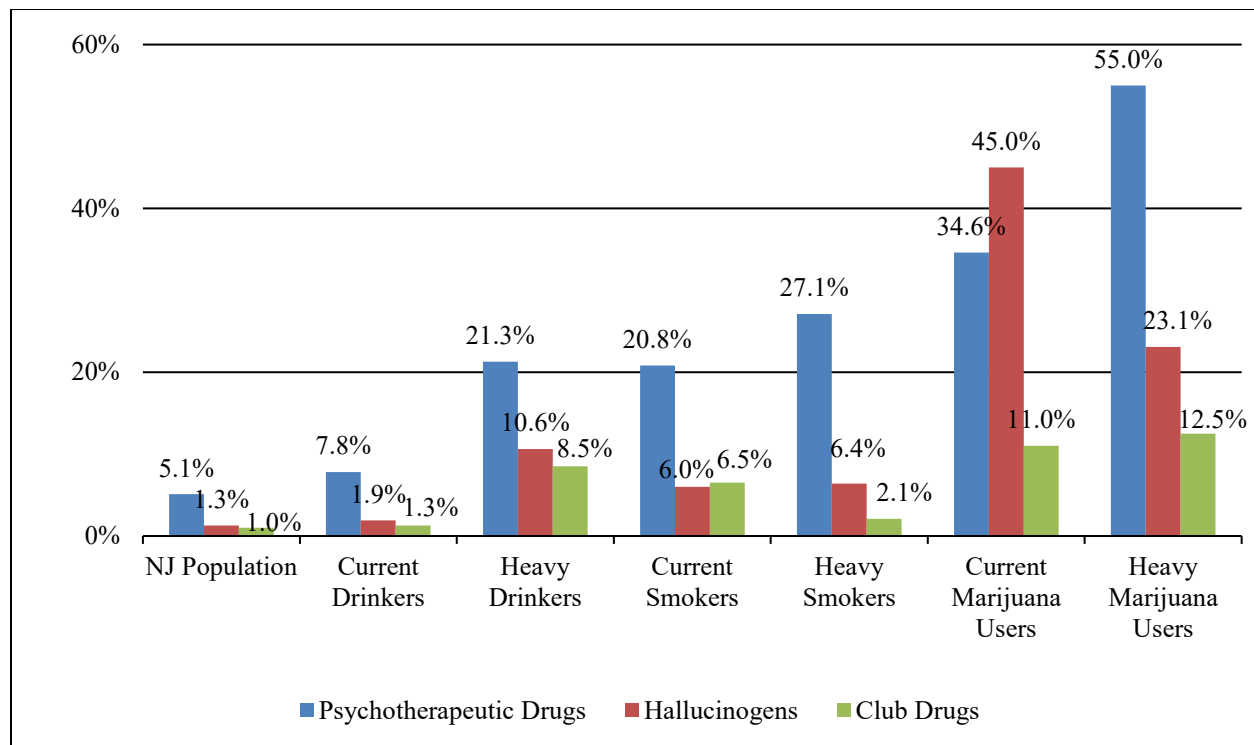
Figure 5-4: Use of Cocaine and Heroin in the Last 12 Months: All New Jersey Residents and Current and Heavy Drinkers, Cigarette Smokers and Marijuana Users



Hallucinogens, Club Drugs and Misuse of Psychotherapeutic Drugs (Figure 5-5)

- Overall, marijuana users were substantially more likely than smokers or drinkers to misuse psychotherapeutic drugs, club drugs and hallucinogens.
- The highest prevalence of psychotherapeutic drug misuse was found among heavy marijuana users (55%), followed by current marijuana users (35%), heavy smokers (27%) and heavy drinkers (21%). Eight percent of current drinkers misused psychotherapeutic drugs, only slightly higher than the proportion misusing these drugs in the general population (5%).
- Current marijuana users were the most likely of all user groups to use hallucinogens in the past year (45%), followed by heavy marijuana users (23%) and heavy drinkers (11%). About 6% each of current and heavy smokers reported past-year hallucinogen use. Hallucinogen use was reported by only 2% of current drinkers, a rate that only slightly exceeded that in the general population (1%).
- Club drugs had the lowest prevalence of use among all user groups, reported by 11% and 13% of current and heavy marijuana users, respectively, and by 9% of heavy drinkers. About 7% of current smokers and 2% of heavy smokers used club drugs in the past year. Current drinkers used club drugs at the same rate as the general population (1%).

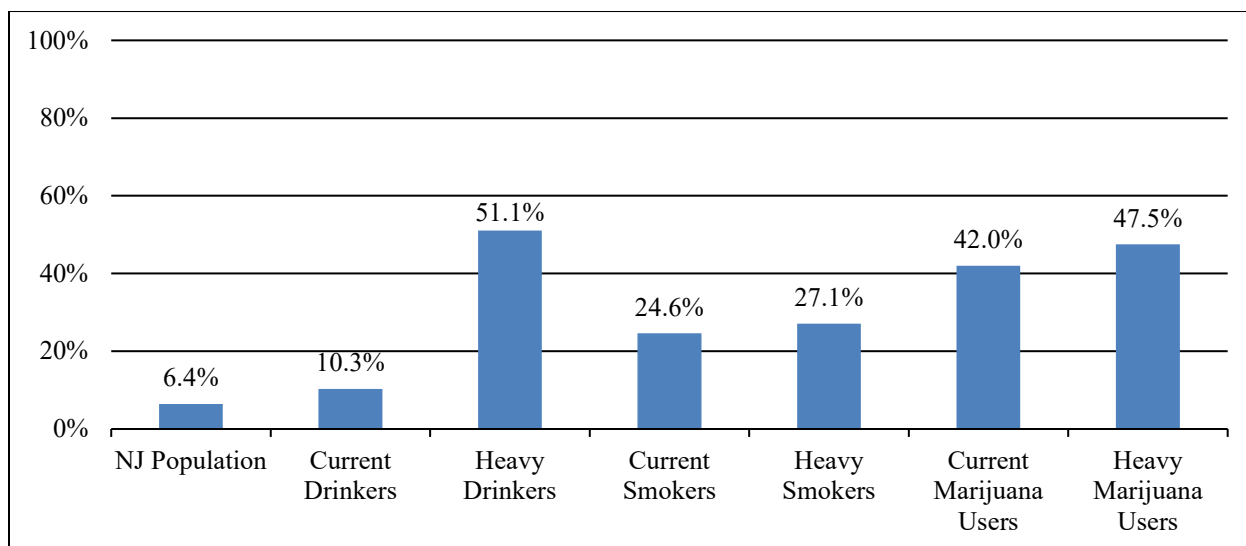
Figure 5-5: Misuse of Psychotherapeutic Drugs, Hallucinogens and Club Drugs in the Last 12 Months: All New Jersey Residents and Current and Heavy Drinkers, Cigarette Smokers and Marijuana Users



Substance Abuse/Dependence (Figure 5-6)

- Heavy drinkers were the most likely of all user groups to meet diagnostic criteria for abuse or dependence on alcohol or drugs in the past year (51%). Heavy and current marijuana users were next in prevalence (48% and 42%, respectively) meeting criteria for abuse or dependence.
- Among current and heavy smokers, 25% and 27%, respectively, met criteria for abuse or dependence.
- Current drinkers as a whole also had elevated rates of abuse/dependence, with 10% meeting abuse/dependence diagnostic criteria compared to 6% in the population as a whole.

Figure 5-6: Proportion of Residents Who Meet Criteria for Substance Abuse or Dependence in Past 12 Months: All New Jersey Residents and Current and Heavy Alcohol Users, Tobacco Cigarette Smokers and Marijuana Users



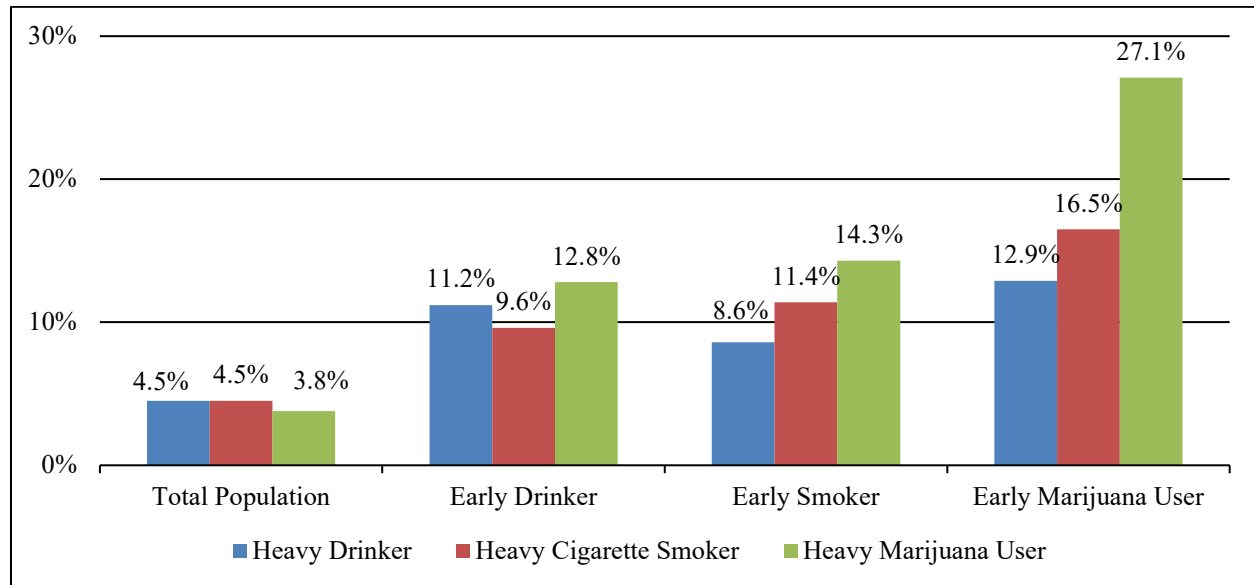
D. AGE OF FIRST USE OF ALCOHOL, CIGARETTES AND MARIJUANA AND THE RELATIONSHIP TO HEAVY SUBSTANCE USE, ILLICIT DRUG USE AND SUBSTANCE ABUSE/DEPENDENCE

Heavy Smoking, Drinking and Marijuana Use (Figure 5-7)

- In general, respondents who first used cigarettes, alcohol or marijuana before age 15 were substantially more likely than the general population to be current heavy users of these substances, with the prevalence of current heavy use for all substances being the highest among early marijuana users.
- Among those who first used marijuana before age 15, 27% were currently heavy marijuana users, 17% were heavy smokers and 13% were heavy drinkers.
- Among early smokers, 14% were heavy marijuana users, 11% heavy smokers and 9%, heavy drinkers.
- Among early drinkers, 13% were heavy marijuana users, 10% heavy smokers and 11%, heavy drinkers.

- In contrast, heavy marijuana use, smoking and drinking were each reported by about 5% of the general population.

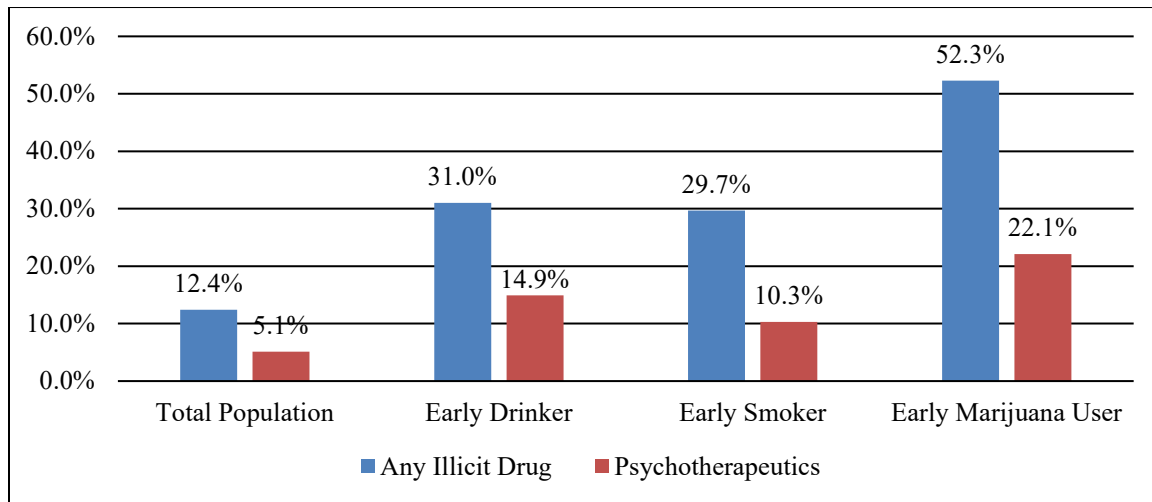
Figure 5-7: Prevalence of Current Heavy Drinking, Heavy Tobacco Cigarette Smoking and Heavy Marijuana Use by Early Use of Each Substance (Before Age 15): All New Jersey Residents



Illicit Drug Use: Any Illicit Drugs and Psychotherapeutic Drugs (Figure 5-8)

- Early use of alcohol, tobacco and marijuana was also associated with substantially higher recent illicit drug use (past 12 months) compared to the general population as a whole.
- Early marijuana users had the highest prevalence of the use of at least one illicit drug (52% vs. 31% of early drinkers and 30% of early smokers). In contrast, only 12% of the general population used any illicit drugs in the past year.
- Early marijuana users were also the most likely of all early users to misuse psychotherapeutic drugs (22% vs. 15% of early drinkers and 10% of early smokers). Only 5% of the general population misused psychotherapeutic drugs in the past 12 months.

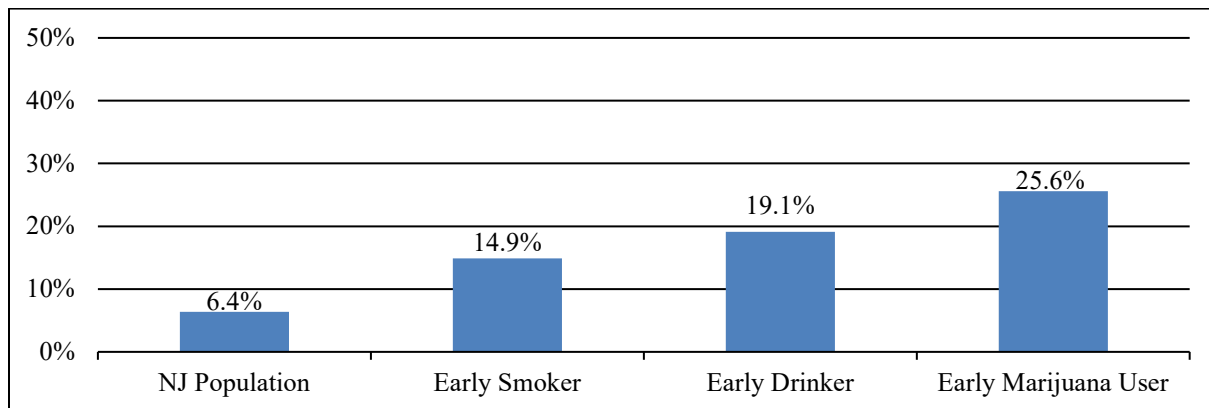
Figure 5-8: Prevalence of Recent Use (Past 12 Months) of Any Illicit Drugs and Psychotherapeutic Drugs by Early Use (Before Age 15) of Tobacco Cigarettes, Alcohol and Marijuana: All New Jersey Residents



Substance Abuse/Dependence (See Chapter 6 for Screening Criteria for Abuse/Dependence) (Figure 5-9)

- Not surprisingly, early smokers, drinkers and marijuana users were substantially more likely than the general population to meet diagnostic criteria for abuse or dependence, with early marijuana users being most at risk.
- About 26% of early marijuana users met diagnostic criteria for abuse of, or dependence on, drugs or alcohol, compared to 19% of early drinkers and 15% of early smokers. In contrast, 6% of the general population met diagnostic criteria for abuse or dependence.

Figure 5-9 Prevalence of Substance Abuse or Dependence in the Last 12 Months by Early Use (Before Age 15) of Tobacco Cigarettes, Alcohol and Marijuana: All New Jersey Residents



CHAPTER 6

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. It also describes patterns of addiction treatment utilization, including levels of treatment access among those in need, population differences in access, types of treatment obtained, and payment sources. Dependence on alcohol and drugs were 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 appropriate criteria for at least one drug.

The following definitions are used in this chapter:

- Treatment Need: The proportion of residents who met the criteria for abuse of, or dependence on, alcohol or drugs in the last 12 months.
- 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.

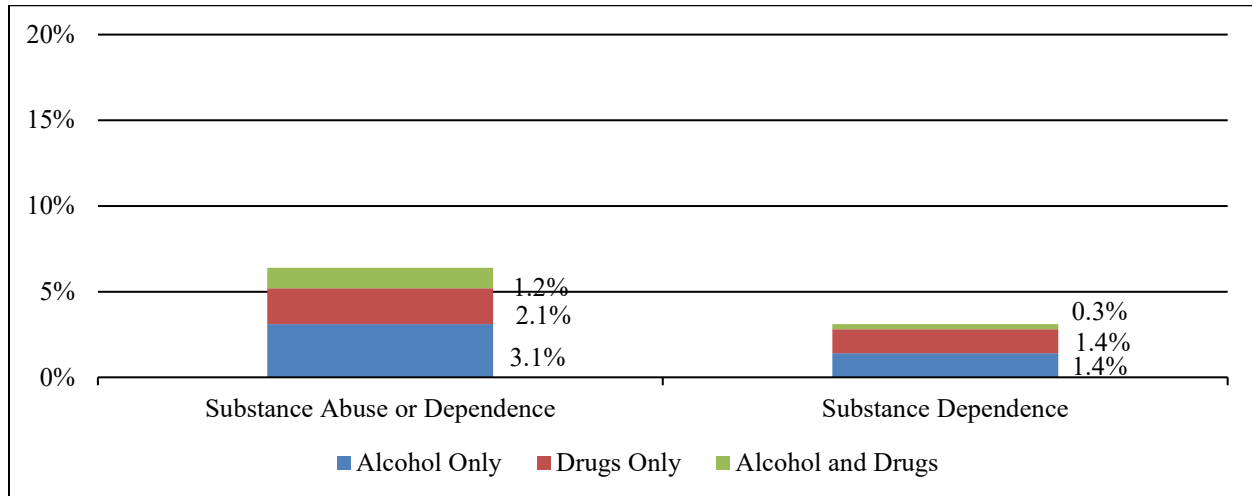
B. PREVALENCE OF ABUSE AND DEPENDENCE

General Population (Figure 6-1)

- In the last 12 months, approximately 6% of New Jersey residents met screening criteria for substance abuse or dependence, with 3% meeting criteria for substance dependence.

- Among those who met the criteria for substance abuse or dependence, 3% had problems with alcohol alone, 2% with drugs alone, and 1% with both.
- Among those who met the criteria for substance dependence, less than 2% were dependent on alcohol alone or dependent on drugs alone, and less than 1% were dependent on both.

Figure 6-1: Substance Abuse and Dependence in the Last 12 Months: New Jersey Residents



C. CHARACTERISTICS OF NEW JERSEY RESIDENTS WHO MET CRITERIA FOR TREATMENT NEED, OVERALL AND BY SUBSTANCE TYPE

- Within the New Jersey population (Table 6-1), males were nearly four times as likely as females to need substance abuse treatment in the last 12 months (11% vs. 3%). With respect to type of treatment need (Figure 6-2), males were almost three times as likely as females to need treatment for alcohol (5% vs. 2%) and drugs (3% vs. 1%) and slightly more likely to need treatment for both alcohol and drug abuse/dependence (1% vs. 0%).
- By age (Table 6-1), the greatest need for treatment was found among 26 to 34 year olds (18%), followed by 18 to 25 year olds (10%). Among 26 to 34 year olds, the highest proportion of treatment need was for alcohol use only (8%), followed by drugs only (6%), with only 3% needing treatment for both alcohol and drugs (Figure 6-2). In contrast, among 18 to 25 year olds, about equal proportions needed treatment for drugs alone (4%) and both alcohol and drugs (4%), while fewer than 1% needed treatment for alcohol alone. Among those older than 34, most treatment need was for alcohol alone (3% of those aged 35 to 49 and 2% of those 50 and older). Less than 1% of those older than 34 needed treatment for both alcohol and drugs while less than 1% of those 50 and older and 2% of 35 to 49 year olds needed treatment for drugs alone.

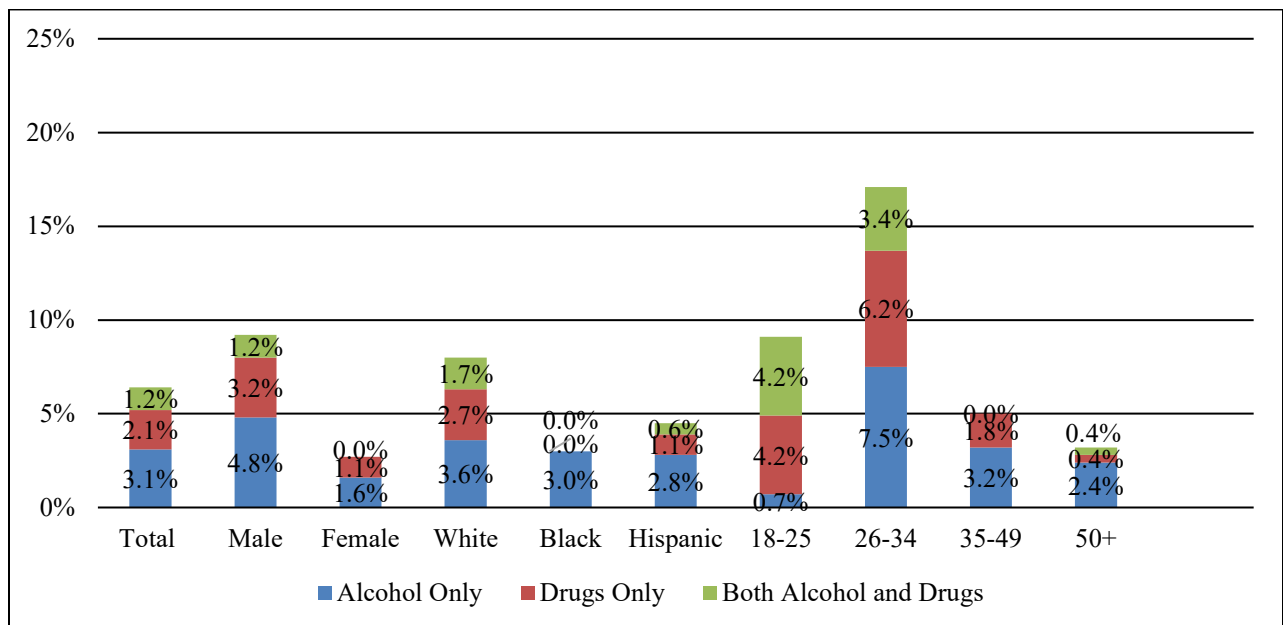
Table 6-1: Characteristics of New Jersey Residents Who Met Criteria for Substance Abuse or Dependence

Demographics			Proportion of New Jersey Population Needing Treatment (%)
<i>New Jersey Total Population</i>		<i>(n=1052)</i>	<i>6.4</i>
Gender	Males	(n=505)	10.5
	Females	(n=547)	2.7
Age	18-25	(n=145)	9.7
	26-34	(n=147)	17.7
	35-49	(n=278)	5.0
	50+	(n=464)	3.2
Race/Ethnicity	White	(n=630)	7.9
	Black	(n=135)	3.0
	Hispanic	(n=181)	4.4
	Asian	(n=80)	6.3
Marital Status	Married	(n=594)	4.2
	Never Married	(n=278)	9.7
	Divorced/Separated	(n=111)	10.9
	Widowed	(n=60)	1.7
Education	Less than H.S.	(n=120)	5.0
	H.S. Grad.	(n=298)	10.0
	Some College	(n=273)	5.1
	College Grad. +	(n=360)	5.3
Employment Status	Employed FT	(n=508)	9.3
	Employed PT	(n=166)	3.6
	Unemployed	(n=95)	4.2
	Retired/Disabled	(n=213)	4.1
Income	Under \$25,000	(n=172)	5.2
	\$25,000-49,999	(n=150)	4.0
	\$50,000-79,999	(n=171)	10.5
	\$80,000-99,999	(n=106)	10.4
	\$100,000 and over	(n=286)	5.9

- By race/ethnicity, the greatest need for treatment was found among Whites (8%), who had twice the need for treatment as African Americans (3%), and Hispanics (4%). Asians reported the second highest need for treatment (6%) (Table 6-1). Among all race/ethnicities, the highest proportion of treatment need was for alcohol alone (4% for Whites, 3% for African Americans and 3% for Hispanics) (Figure 6-2). One percent or fewer of African Americans and Hispanics needed treatment for drugs alone or both alcohol and drugs. Among Whites, 2% needed treatment for both alcohol and drugs and 3% for drugs alone.

- Treatment need was highest among residents who were divorced/separated (11%) and the never married (10%). Four percent of married residents had a need for treatment and less than 2% of those who were widowed needed treatment.
- By education status, high school graduates had the highest need for treatment (10%). Residents with less than a high school education, some college, or college graduates reported a similar need for treatment (approximately 5% for all groups).
- Residents with full-time employment had the highest need for treatment of all employment groups (9%). Residents who were employed part-time, the unemployed, and the retired/disabled reported a similar need for treatment (approximately 4% for all groups).
- By income, those earning between \$50,000 and \$99,999 per year had the highest need for treatment (10%). Approximately 6% of those earning \$100,000 or more reported a need for treatment, followed by 5% of those earning \$25,000 or less, and 4% of residents earning \$25,000-\$49,000.

Figure 6-2: Abuse or Dependence in the Last 12 Months by Gender, Race/Ethnicity and Age: New Jersey Residents

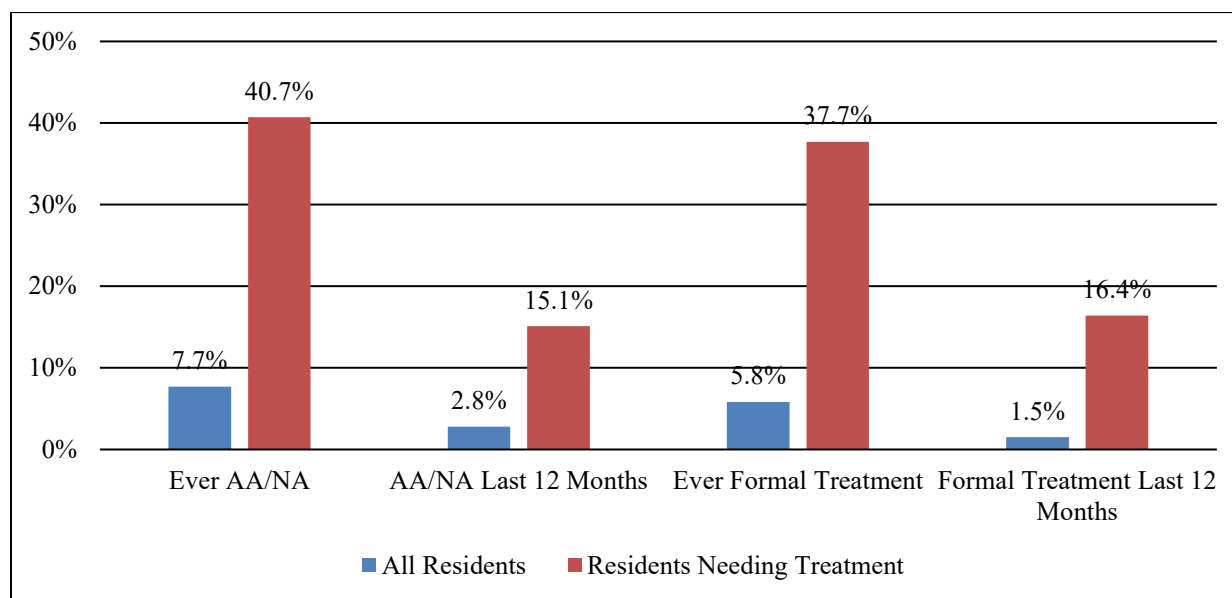


D. TREATMENT ACCESS AND UTILIZATION PATTERNS

D1. Prevalence of Treatment: Among the Population as a Whole and Those in Need (Figure 6-3)

- Residents were somewhat more likely to have accessed self-help groups to address alcohol and drug problems in their lifetimes than they were formal treatment. Eight percent of all residents, and 41% of those needing treatment, reported lifetime use of self-help groups compared to 6% and 38%, respectively, who accessed formal treatment at some time in their lives.
- In the past 12 months, 3% of all residents and 15% of those needing treatment had used self-help groups compared to 2% and 16%, respectively, who accessed formal treatment.

Figure 6-3: Lifetime and Past Year Receipt of AA/NA or Formal Treatment: All New Jersey Residents and Residents Needing Treatment

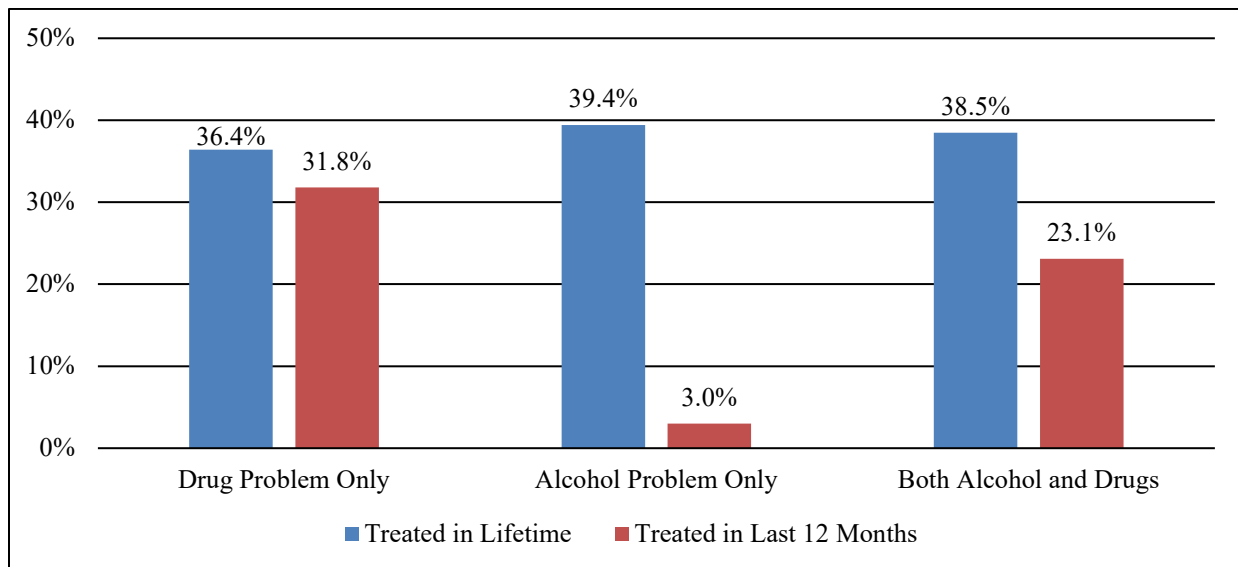


D2. Treatment Access by Type of Problem (Figure 6-4)

- Among residents needing treatment in the past year, those with an alcohol problem only were substantially less likely to have accessed substance abuse treatment in the past 12 months than those with drug problems, and those with both alcohol and drug problems, (3% vs. 32% vs. 23%, respectively).

- However, New Jersey residents needing treatment reported similar rates for lifetime treatment access for drugs only (37%), alcohol only (39%), and both alcohol and drugs (39%).

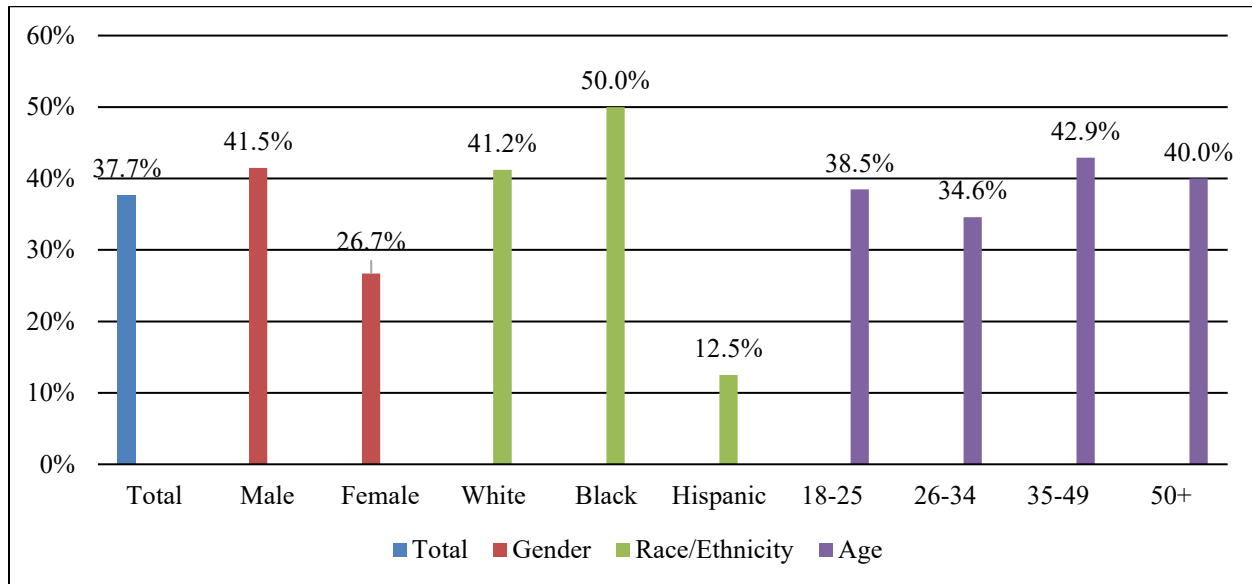
Figure 6-4: Receipt of Formal treatment in Lifetime and Last 12 Months by Type of Substance Problem: New Jersey Residents Needing Treatment



D3. Lifetime Treatment Access among Residents Needing Treatment by Age, Gender, and Race/Ethnicity (Figure 6-5)

- When the demographic characteristics of residents who accessed treatment were examined, men were substantially more likely than women to have had formal treatment in their lifetime (42% vs. 27%).
- Whites and African Americans were also substantially more likely than Hispanics to have received substance abuse treatment in their lifetimes (41% and 50% vs. 13%, respectively).
- There were few age differences in lifetime access to treatment. The highest rate of treatment access was found among 35 to 49 year olds (43%), followed by residents aged 50 or older (40%). Thirty-nine percent of residents aged 18-25 and 35% of those aged 26-34 reported obtaining treatment in their lifetimes.

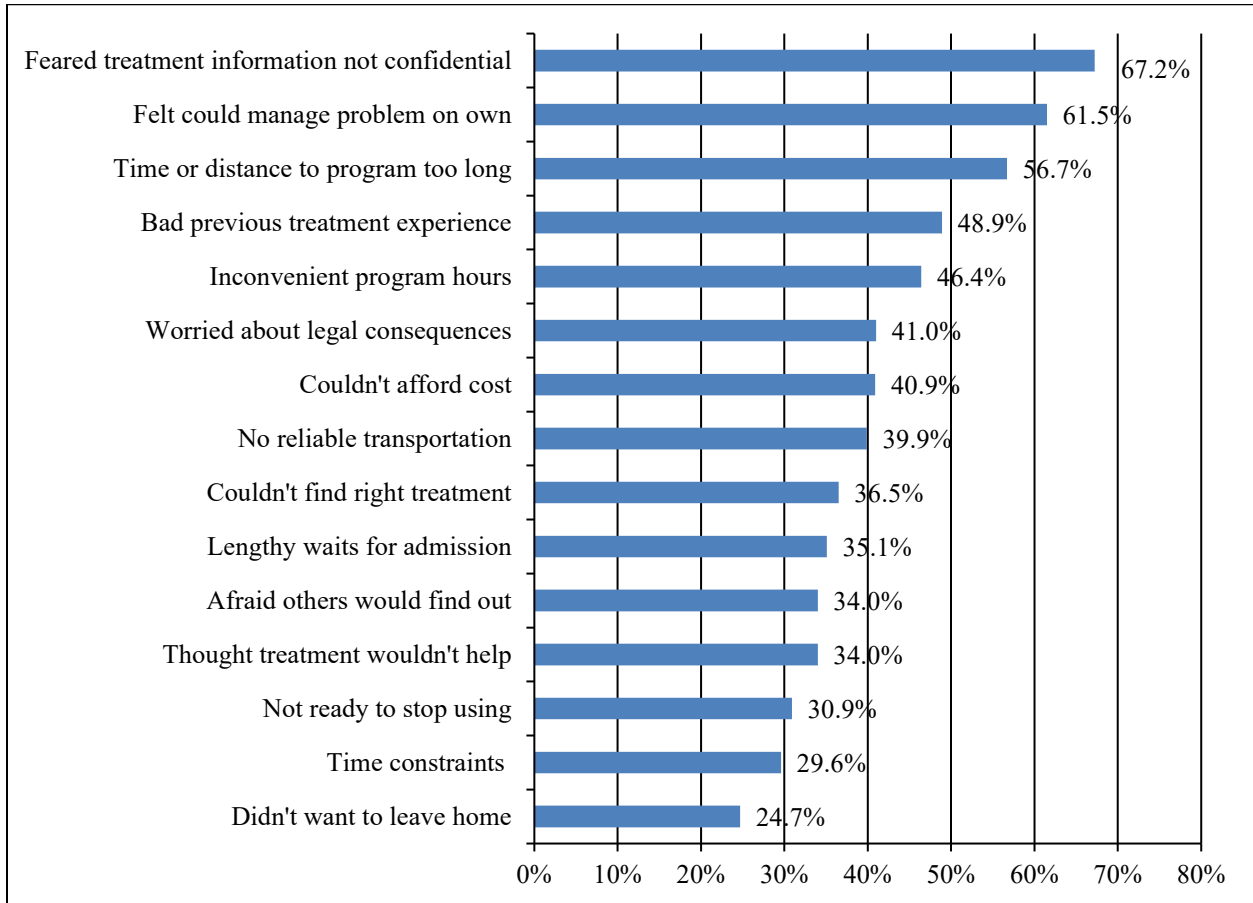
Figure 6-5: Receipt of Treatment in Lifetime by Gender, Age and Race/Ethnicity: New Jersey Residents Who Needed Treatment



D4. Barriers to Treatment (Figure 6-6)

- The greatest barrier to accessing or continuing to stay in treatment, reported by 67% of respondents who were treated or felt they needed treatment in the past year, was the fear that information provided to counselors during treatment sessions would not remain confidential.
- The second most frequently mentioned barrier (62%) was the belief by respondents that they could manage the problem on their own.
- Other important barriers were lengthy time or distance to treatment (57%), having a prior negative experience with treatment (49%), inconvenient program hours (46%), worry about legal consequences (41%), treatment cost (41%) and lack of reliable transportation (40%).
- Additional barriers to care included the inability to locate the right type of program (37%), lengthy waits for admission (35%), fear that others would find out (34%), the belief that treatment would not help (34%) and not being ready to stop using (31%).
- Time constraints, in the form of a job, childcare responsibilities, etc., were mentioned as a barrier by 30% of respondents and concern that treatment would necessitate leaving home was reported by 25%.

Figure 6-6: Barriers to Treatment Among Residents Reporting A Need for Treatment in the Last 12 Months ^{1,2}



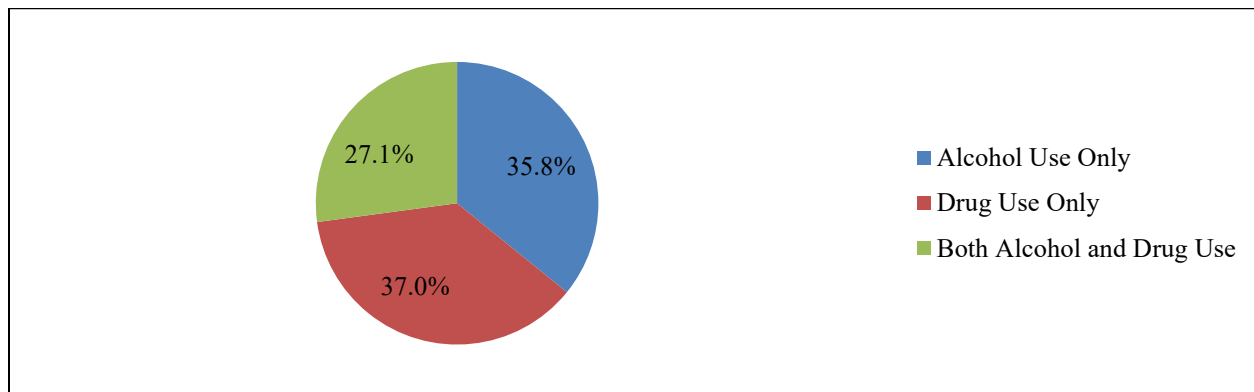
¹These questions were asked of residents who both received and did not receive treatment in the last 12 months, since those receiving treatment also encounter barriers that interfere with ease of access.

²Respondents could mention more than one barrier, so results do not sum to 100%.

D5. Treatment Type, Setting, and Payment Sources

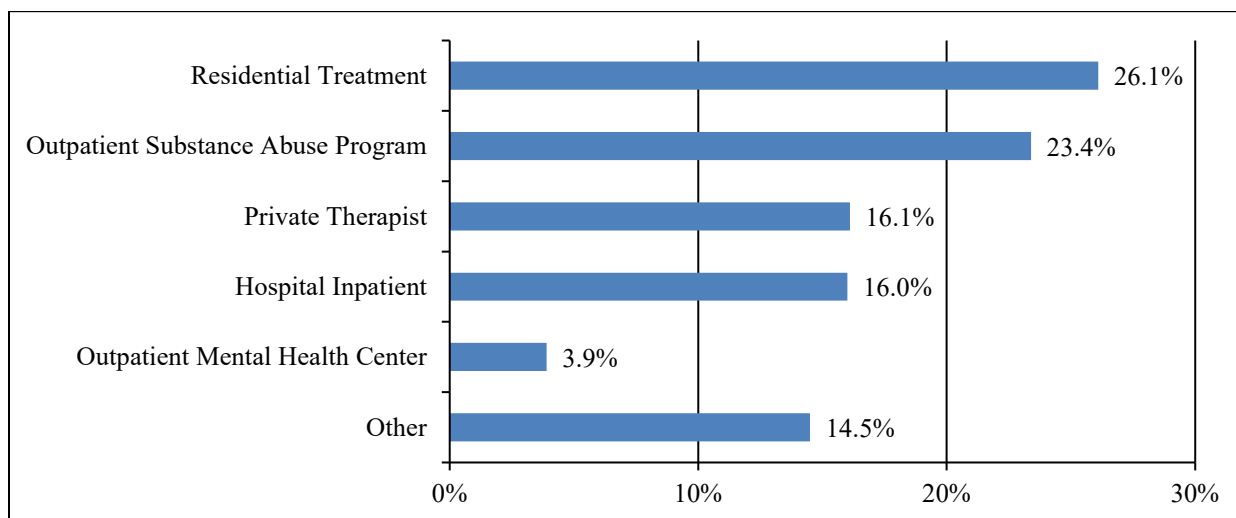
- Among residents who ever received formal treatment, 36% were treated for alcohol problems alone, 37% for drug problems alone, and 27% for both alcohol and drug problems (Figure 6-7).

Figure 6-7: Type of Formal Treatment Received in Lifetime: New Jersey Residents Who Ever Received Substance Abuse Treatment



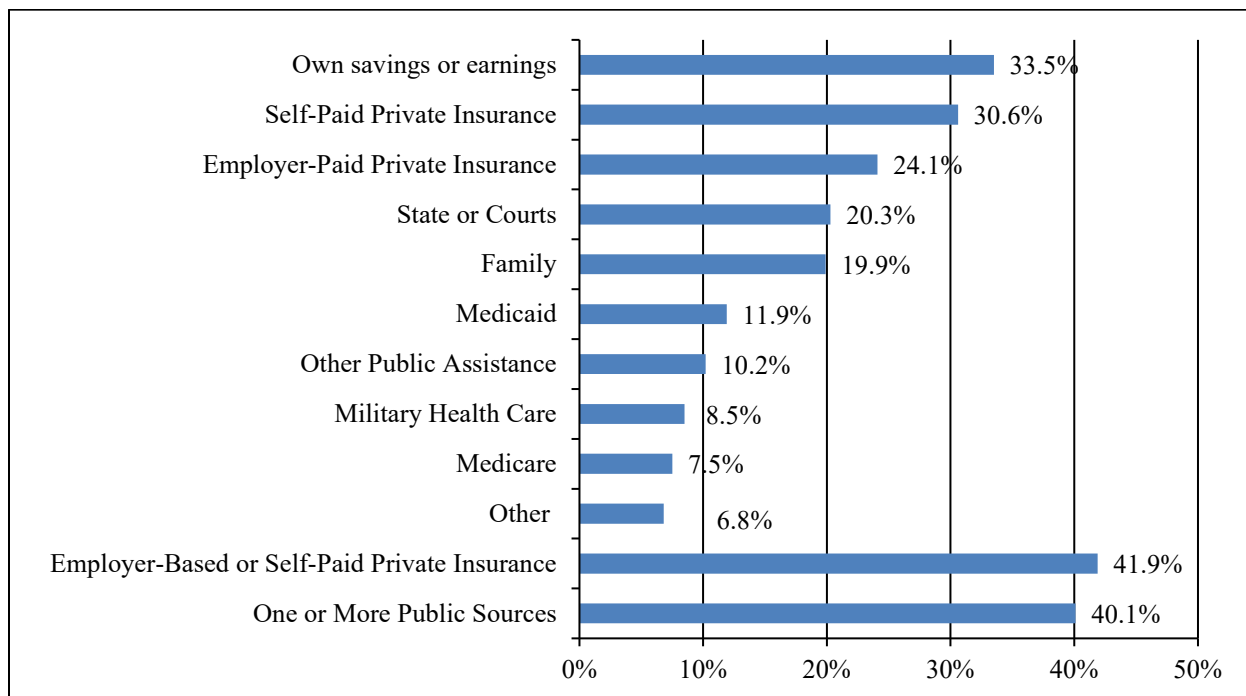
- Residential treatment (26%) and outpatient substance abuse treatment programs (23%) were the most frequently reported treatment settings by residents who had received substance abuse treatment in their lifetimes (Figure 6-8).
- About 16% of treated residents had been treated by private therapists or hospital inpatients.
- Only 4% reported receiving substance abuse treatment in an outpatient mental health clinic.

Figure 6-8: Setting of Last Treatment Episode: New Jersey Residents Who Ever Received Substance Abuse Treatment



- Among residents treated in their lifetimes, private insurance represented the most important treatment payment source (Figure 6-9), mentioned by 42% of treated respondents. Private insurance sources included self-paid (31%) and employer-based (24%) insurance plans.
- Public funding was a close second to private insurance funding, with 40% of respondents mentioning at least one public source. Public payment sources included the State or Court system (20%), Medicaid (12%), other public assistance (10%), military health insurance (9%) and Medicare (8%).
- Personal savings or earnings were next in importance, mentioned by 34% of respondents.
- Family members also assisted with treatment payment for 20% of treated respondents.

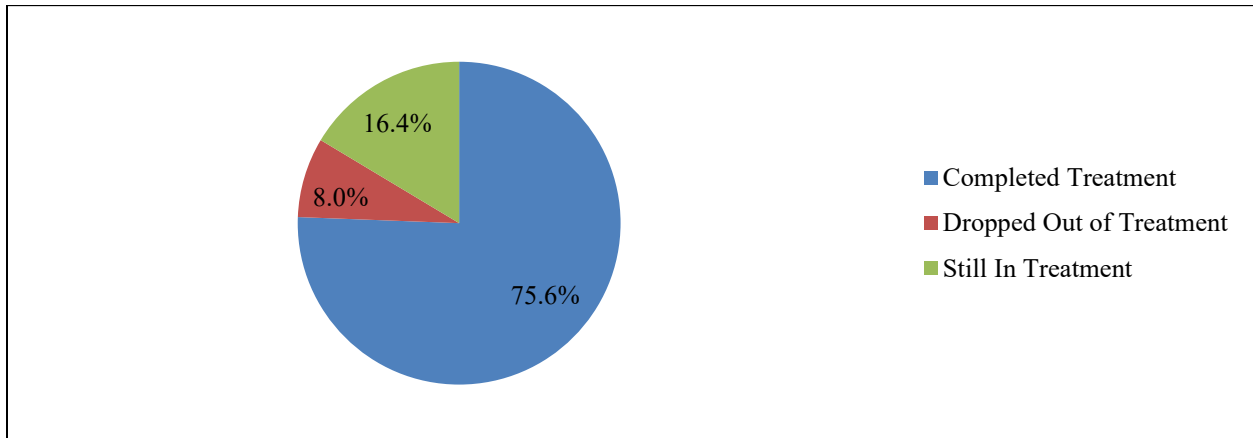
Figure 6-9: Sources of Payment for Treatment: New Jersey Residents Who Ever Received Treatment¹



¹Results do not add up to 100% since respondents could mention more than one payment source.

- Among residents treated in their lifetimes, 76% reported that they had successfully completed their last episode of treatment, 16% were still in treatment and 8% had dropped out (Figure 6-10).

Figure 6-10: Outcome of Last Treatment Episode: New Jersey Residents Who Ever Received Treatment



CHAPTER 7

MENTAL HEALTH AND CO-OCCURRING DISORDERS

A. INTRODUCTION

This chapter examines the mental health status of New Jersey residents. Mental health survey questions included items from three, ultra-brief, mental health screening tools which are used to screen for mental health disorders in primary care and other settings. The screening tools in this survey included four items measuring anxiety and depression from the 16-question Patient Health Questionnaire (PHQ) (Spitzer et al., 1999). Commonly referred to as the PHQ-4, the 4-item scale includes a 2-item depression scale (PHQ-2) and a 2-item anxiety scale (General Anxiety Disorder Scale-2, or GAD-2). Studies have found the PHQ-4 reliably and validly measures anxiety and depression in both clinical and general populations (Löwe et al., 2010). The third mental health measure used in this survey was the Primary Care PTSD Screen (PC-PTSD), a 4-item instrument originally developed to screen for post-traumatic stress disorder in military veterans that studies have established to be a valid and reliable screening tool for civilian populations as well (Cameron & Gusman, 2003). These instruments assess for symptoms of anxiety, depression and PTSD in respondents but are not equivalent to a psychiatric diagnosis obtained from a comprehensive clinical assessment.

In addition to assessing for possible mental health disorders, the survey also included questions on mental health treatment histories of respondents.

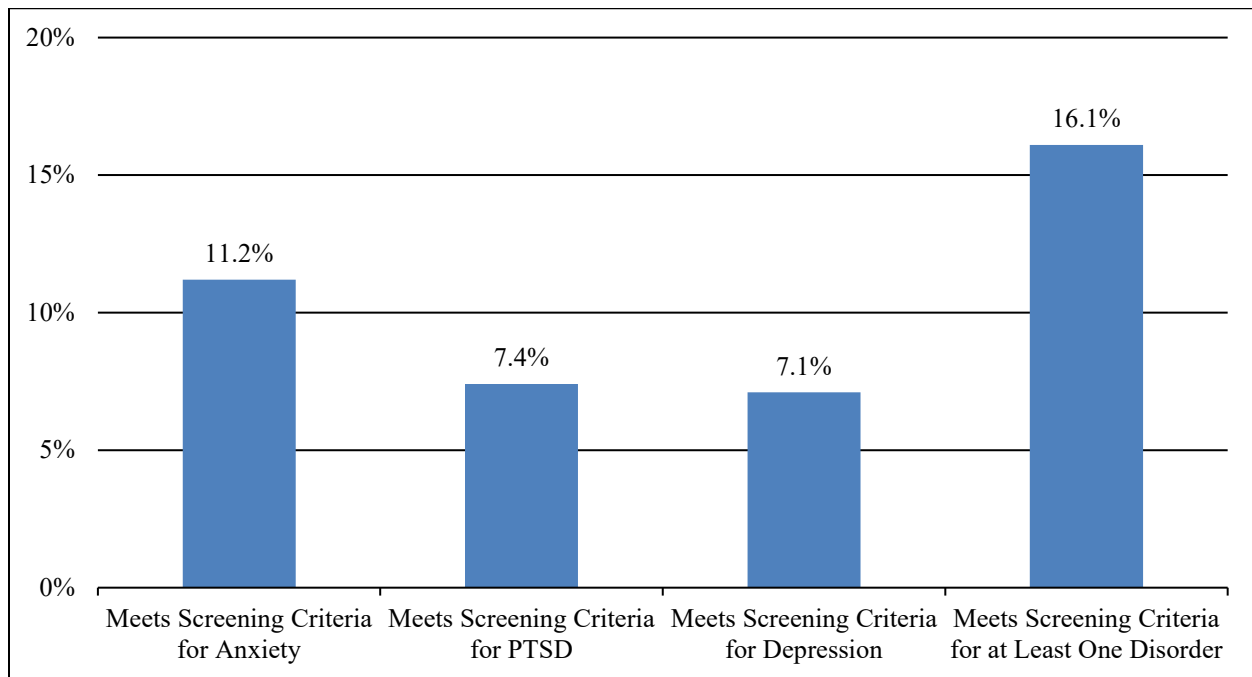
In this chapter, we report on the prevalence and demographic characteristics of patients screening positive for mental health disorders, relationships between mental health problems and the use of alcohol, drugs and nicotine, the extent to which New Jersey residents gained access to mental health treatment when needed and demographic disparities in mental health treatment access.

B. PREVALENCE OF MENTAL HEALTH DISORDERS AMONG NEW JERSEY RESIDENTS

B1. Prevalence of Positive Screens for Anxiety, Depression and PTSD (Figure 7-1)

- Altogether, 16% of New Jersey residents screened positive for at least one of the three mental health disorders measured in this survey – anxiety, depression or PTSD.
- The most prevalent mental health condition was anxiety, with 11% of residents screening positive for this disorder. Equivalent proportions of residents screened positive for depression and PTSD (7%).

Figure 7-1: Proportion of New Jersey Residents Screening Positive for Anxiety, Depression and PTSD*



*NOTE: Symptoms of Anxiety and Depression were measured for the last 2 weeks; PTSD symptoms were measured for the last 30 days.

B2. Demographic Characteristics of New Jersey Residents Screening Positive for Mental Health Disorders: Sex, Age, Race/Ethnicity, Education and Marital Status (Table 7-1)

- There was little difference between men and women in the proportion with at least one positive mental health screen (15% of men vs. 17% of women) or in the proportion with positive screens for specific disorders. Among men, 10% were positive for anxiety, 8% for depression and 7% for PTSD. Among women, 12% were positive for anxiety, 6% for depression and 8% for PTSD.
- By race/ethnicity, the highest rate of positive mental health screens overall was found among African Americans (20%) and Hispanics (19%), and the lowest, among Asians (10%). Sixteen percent of Whites screened positive for at least one disorder.
- There were few differences among Whites, African Americans and Hispanics in the proportion screening positive for anxiety (12%, 10% and 13%, respectively) or PTSD (7%, 10% and 9%, respectively). Asians were substantially less likely than other residents to screen positive for anxiety (4%) and slightly less likely to screen positive for PTSD (8%).

- African Americans had a substantially higher prevalence of depression than other residents (13% vs. 6% of Whites, 8% of Hispanics and 4% of Asians).
- There was a tendency for residents 35 and older to have a lower prevalence of positive mental health screens than younger residents, with 15% of those aged 35 to 49 and 14% of residents 50 and older having at least one positive screen. Among younger respondents, however, 20% of 18 to 20 year olds, 23% of 21 to 25 year olds and 21% of 26 to 34 year olds had at least one positive screen.
- The higher prevalence of positive mental health screens in younger residents was most pronounced with respect to PTSD, with positive PTSD screens occurring in 17% of those in both the 18 to 20 and 21 to 25 year old age groups. In comparison, 10% of 26 to 34 year olds, 8% of 35 to 49 year olds and 3% of those 50 and older screened positive for PTSD.
- Positive screens for anxiety were most prevalent among 18 to 20 year olds (15%) and 26 to 34 year olds (16%). Lower positive anxiety screening rates were found among residents aged 21 to 25 (8%), 35 to 49 (9%) and 50 and older (11%).
- There were fewer age differences in the prevalence of positive screens for depression, which ranged from 6% of those in the 21 to 25 and in the 50 and older age groups to 11% of those aged 18 to 20. Positive depression screens were found in 10% of 26 to 34 year olds and 8% of those aged 35 to 49.
- There was a strong association between positive mental health screens and education level, with the highest prevalence of positive screens overall occurring among those having less than a high school education (25%) and the lowest among those with a college education or better (8%). At least one positive screen was found in 20% of both high school graduates and those with some college education.
- Residents who did not finish high school also had the highest prevalence of positive screens for each disorder, including 21% for anxiety, 13% for depression and 16% for PTSD. In contrast, college graduates had the lowest prevalence of positive screens for each disorder, including 5% for anxiety, 3% for depression and 2% for PTSD.

Table 7-1: Demographic Characteristics of New Jersey Residents Having Positive Screens for Anxiety, Depression and PTSD

			Anxiety	Depression	PTSD	One or More Disorders
			(%) with positive screen	(%) with positive screen	(%) with positive screen	(%) with at least one positive screen
New Jersey Total Population n=1052			11.2	7.1	7.4	16.1
Gender	Male	n=505	10.1	8.3	6.7	15.3
	Female	n=547	12.2	6.0	8.0	16.8
Race/ Ethnicity	White	n=631	12.2	6.2	6.7	15.9
	African American	n=135	10.4	13.3	10.4	20.0
	Hispanic	n=180	13.3	8.3	8.9	18.8
	Asian	n=80	3.8	3.8	7.5	10.1
Age	18-20	n=66	15.2	10.6	16.7	19.7
	21-25	n=78	7.7	6.4	16.5	22.8
	26-34	n=147	15.6	9.5	10.2	21.1
	35-49	n=278	8.6	7.6	7.9	14.7
	50+	n=464	11.4	5.8	3.4	14.0
Education	Less than High School	n=120	20.8	12.5	15.8	25.0
	High School Graduate	n=298	13.8	8.4	7.4	19.7
	Some College	n=272	11.8	9.5	10.6	19.5
	College Graduate or Better	n=360	5.3	2.5	2.2	7.8
Marital Status	Married	n=594	9.4	4.4	3.4	11.8
	Never Married	n=278	14.0	10.8	14.0	20.5
	Divorced/Separated	n=110	14.5	13.6	10.9	25.5
	Widowed	n=60	11.7	6.8	6.7	18.3

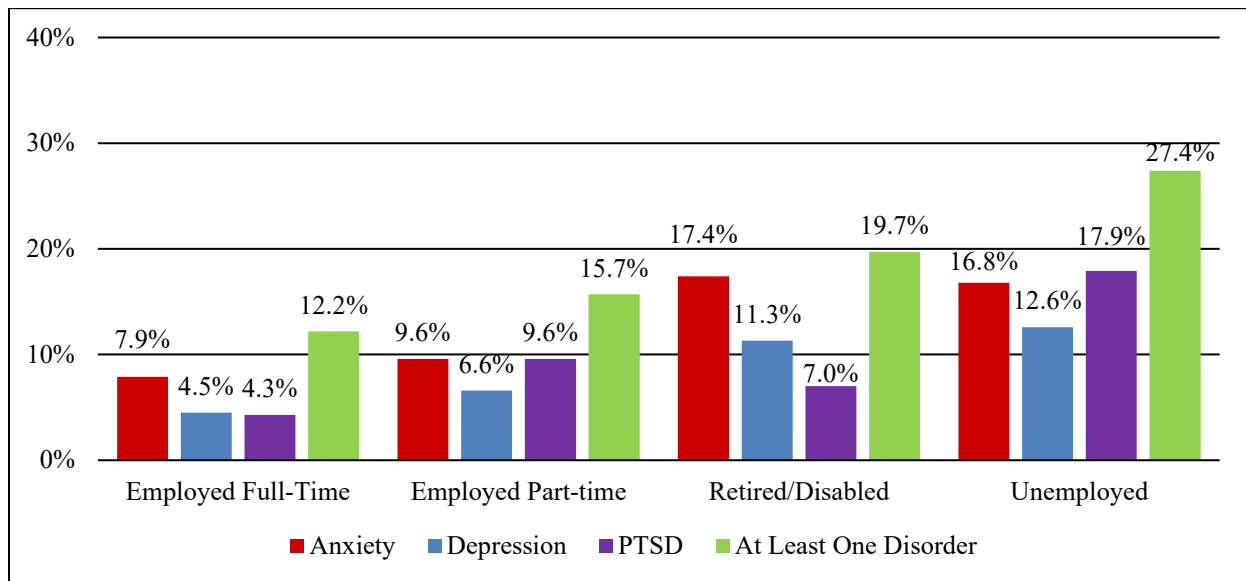
- By marital status, the highest prevalence of positive mental health screens overall was found among the divorced/separated (26%) followed by the never married (21%). Eighteen percent of widowed residents and 12% of married residents screened positive for at least one mental health disorder.

- By, specific disorder, married residents had the lowest rates of each disorder and divorced/separated and never married residents, the highest. Thus, divorced/separated residents had the highest prevalence of depression of all marital groups (14%) and, along with never married residents, the highest prevalence of anxiety (14% each). In contrast, rates of depression and anxiety among married residents were 4% and 9%, respectively.
- Similarly, positive screens for PTSD were most prevalent among the never married (14%) and the divorced/separated (11%). Only 3% of married residents and 7% of the widowed screened positive for PTSD.

B3. Demographic Characteristics of New Jersey Residents Screening Positive for Mental Health Disorders: Employment Status (Figure 7-2) and Income (Figure 7-3).

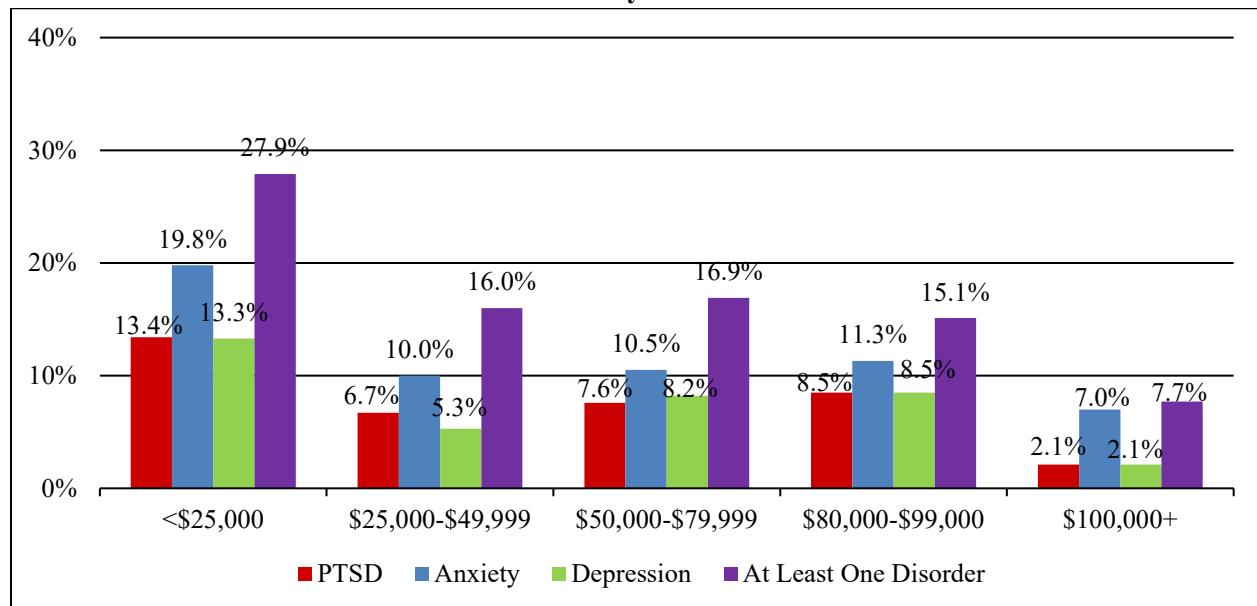
- There was a strong association between the prevalence of positive screens for mental health disorders and both education and income status. In general, the highest rates of positive screens overall and by specific disorder were found among the unemployed, the underemployed, and those at the lowest income levels; while the lowest rates were found among residents with full-time jobs and those at the highest income levels.
- By employment status, 12% of those working full time screened positive for at least one disorder, with the prevalence of positive screens increasing to 16% among part-time workers, 20% among the retired/disabled and 27% among the unemployed.

Figure 7-2: Prevalence of Positive Screens for Mental Health Disorders, by Employment Status: New Jersey Residents



- Similar patterns were found with respect to the prevalence of specific disorders. Positive screens for anxiety increased from 8% among full time workers to 17% among the unemployed, while positive screens for depression and PTSD increased from 4% for each disorder among those employed full time to 13% and 18%, respectively, among the unemployed.
- By income (Figure 7-3), the most substantial differences were found between those at the polar ends of the income scale, with the lowest wage earners having the highest rates of positive mental health screens, and the highest wage earners, the lowest.
- The proportion screening positive for at least one disorder was 28% among those earning less than \$25,000 a year and 8% among those earning \$100,000 or more. Among those in the middle income groups, rates of positive screens overall varied between 15% and 17%.

Figure 7-3: Prevalence of Positive Screens for Mental Health Disorders, by Income:
New Jersey Residents

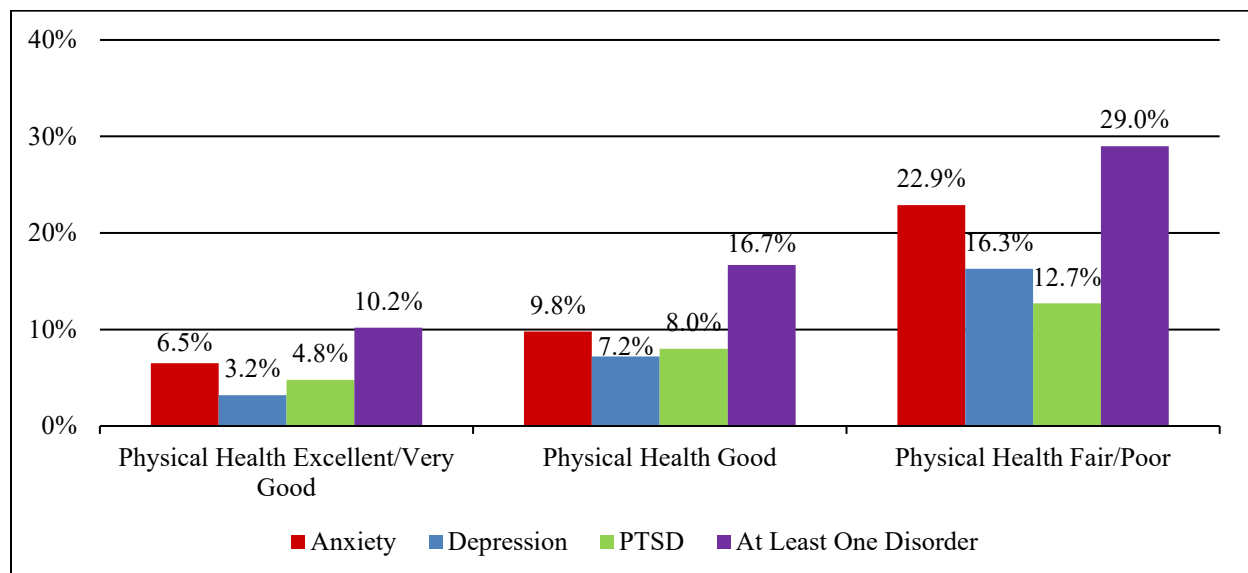


- By specific disorder, positive screens for anxiety decreased from 20% among the lowest wage earners to 7% among those earning \$100,000 or more, with rates among middle income earners ranging from 10% to 11%. Similarly, positive depression and PTSD screens decreased from 13% each among those earning under \$25,000 to 2% each among those earning \$100,000 or more. Rates among middle income wage earners ranged from 5% to 9% for depression and 7% to 9% for PTSD.

B4. Physical Health Status of New Jersey Residents Screening Positive for Mental Health Disorders (Figure 7-4)

- Mental health status was also found to be related to physical health, with residents who rated their physical health as fair or poor being more likely to screen positive for mental health disorders than residents reporting good or excellent health.
- Among residents rating their health as excellent or very good, only 10% screened positive for one or more mental health disorders, including 7% who screened positive for anxiety, 3% for depression and 5% for PTSD.
- In contrast, among those with fair or poor self-rated health, 29% screened positive for at least one disorder, including 23% for anxiety, 16% for depression and 13% for PTSD.
- Among residents who rated their health as good, 17% had at least one positive mental health screen, including 10% who screened positive for anxiety, 7% for depression and 8% for PTSD.

Figure 7-4: Prevalence of Positive Screens for Mental Health Disorders by Self-Rated Physical Health Status



C. SUBSTANCE USE AND CO-OCCURRING DISORDERS

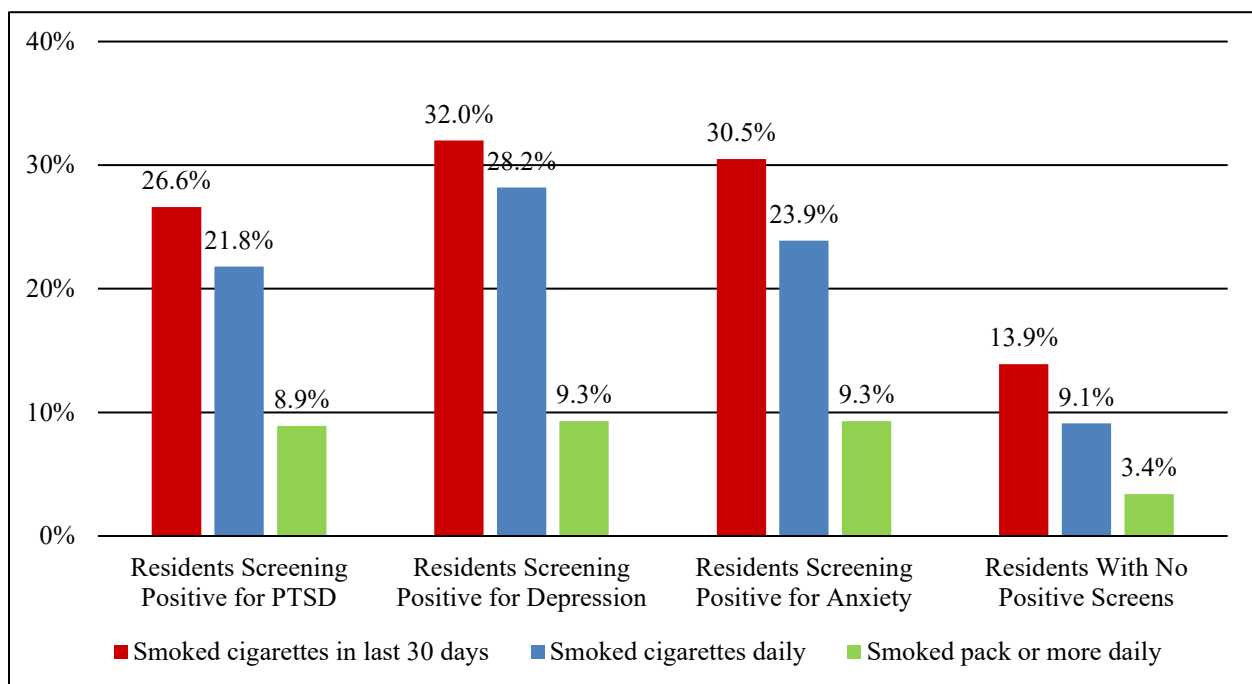
In this section we examine the co-occurring risks of mental health disorders and substance abuse. Section C1 describes the prevalence of substance use among residents who screened positive for mental health disorders. Section C2 reports the prevalence of mental health disorders among substance users, including past 30-day (current) and heavy users of alcohol, tobacco cigarettes and marijuana.

C1. Prevalence of Alcohol Use, Illicit Drug Use and Cigarette Smoking among Residents Who Screen Positive for Mental Health Disorders

Tobacco Cigarette Smoking (Figure 7-5)

- Overall, residents screening positive for mental health disorders were more likely to be recent, current, and heavy cigarette smokers than those with no positive screens.
- Among residents with no positive mental health screens, 14% were current smokers, 9% smoked daily and 3% smoked a pack or more per day. In contrast, among those with positive screens for anxiety, depression or PTSD, the prevalence of current smoking ranged from 27% to 32% and daily smoking, from 22% to 28%. Nine percent of residents in each diagnostic group reported heavy smoking.

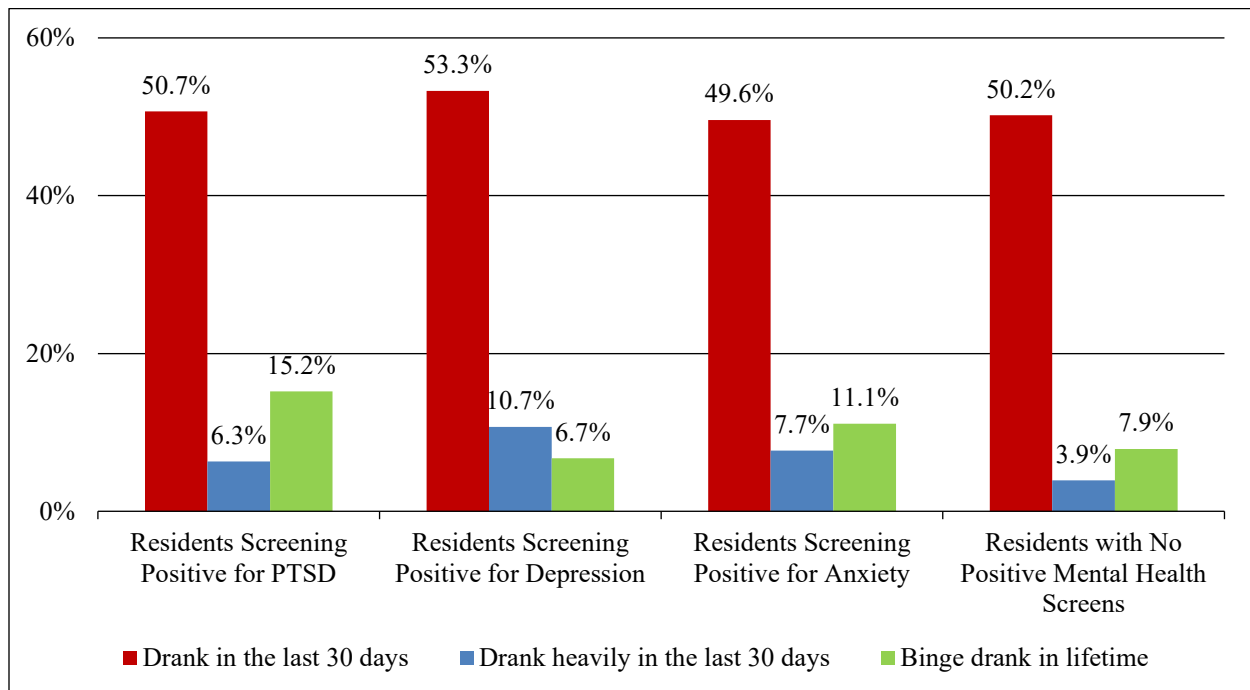
Figure 7-5: Tobacco Cigarette Smoking by Mental Health Screening Status



Alcohol Use (Figure 7-6)

- In general, there was little variation in current alcohol use by mental health screening status, with 50% to 53% of residents with and without a positive mental health screen reporting current drinking.
- However, those with symptoms of depression had the highest prevalence of heavy drinking (11%), with a slightly lower prevalence found among those screening positive for anxiety (8%) and PTSD (6%). In contrast, only 4% percent of those with no positive screens drank heavily.
- Those with PTSD had the highest prevalence of binge drinking (15%), followed by those screening positive for anxiety (11%). Lifetime binge drinking occurred among 7% of those screening positive for depression and 8% of those with no positive screens.

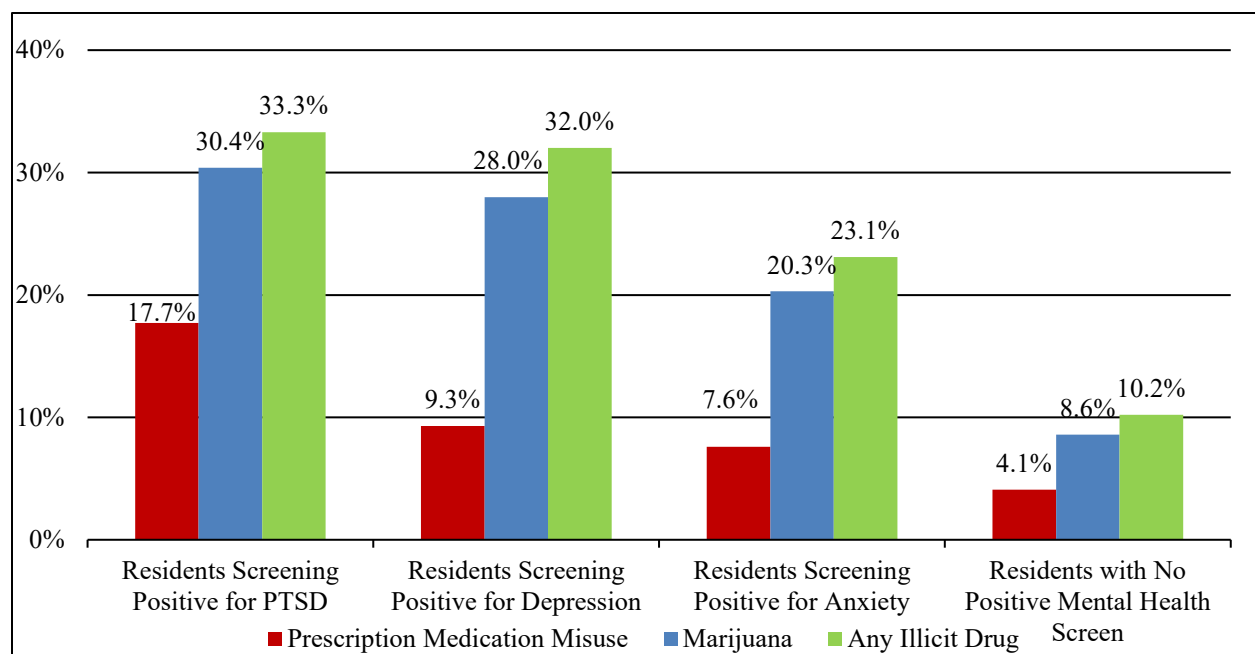
Figure 7-6: Alcohol Use by Mental Health Disorder Screening Status



Drug Use (Figure 7-7)

- In general, the most remarkable differences in substance use by mental health status were found with respect to the use of drugs, with those screening positive for mental health disorders misusing psychotherapeutic medications, marijuana and at least one illicit drug at rates two to three times higher than those with no positive mental health screens.
- Residents meeting screening criteria for PTSD and depression had the highest rates of drug use of all screening categories. Thirty-three percent of those with positive PTSD screens and 32% of those screening positive for depression had used one or more illicit drugs in the last 12 months compared to 23% of those with positive anxiety screens and 10% of those with no positive screens.
- Marijuana was used in the last 12 months by 30% of those with positive PTSD screens, 28% of those screening positive for depression, 20% of those screening positive for anxiety and 9% of those with no positive screens.

Figure 7-7: Psychotherapeutic Medication Misuse, Marijuana Use and Any Illicit Drug Use in the Last 12 Months by Mental Health Screening Status

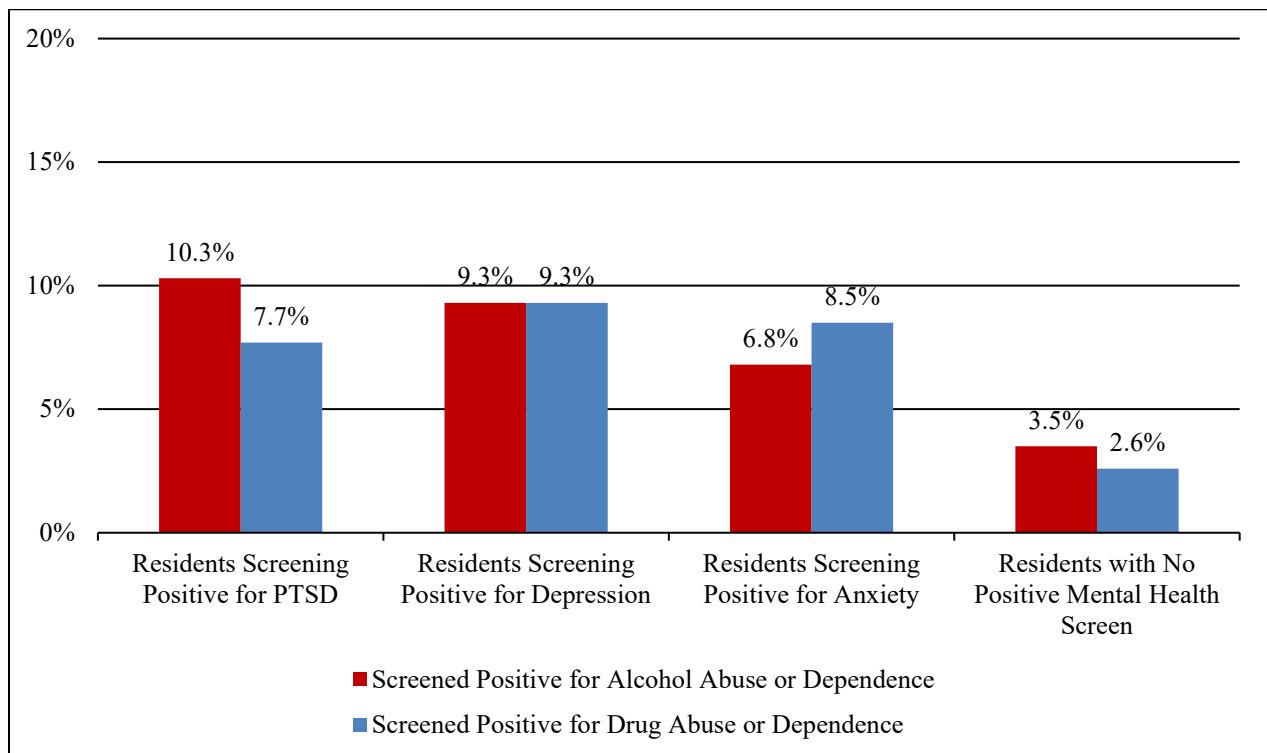


- Misuse of psychotherapeutic medication in the past year was reported by 18% of those with positive PTSD screens, 9% of those with positive depression screens, 8% of those screening positive for anxiety and 4% of those with no positive screens.

Substance Abuse and Dependence (Figure 7-8)

- Residents screening positive for mental health disorders were also more likely than those with no positive screens to meet the criteria for drug and alcohol abuse or dependence.
- Among those with no positive mental health screens, 3% screened positive for drug abuse or dependence and 4% screened positive for alcohol abuse or dependence. In contrast, among those with a positive PTSD screen, 10% screened positive for alcohol abuse or dependence and 8% for drug abuse or dependence.
- Elevated rates of abuse/dependence for alcohol and drugs were also found among those screening positive for depression (approximately 9% for each substance) and anxiety (7% and 9%, respectively).

Figure 7-8: Alcohol and Drug Abuse/Dependence by Screening Status for Mental Health Disorders

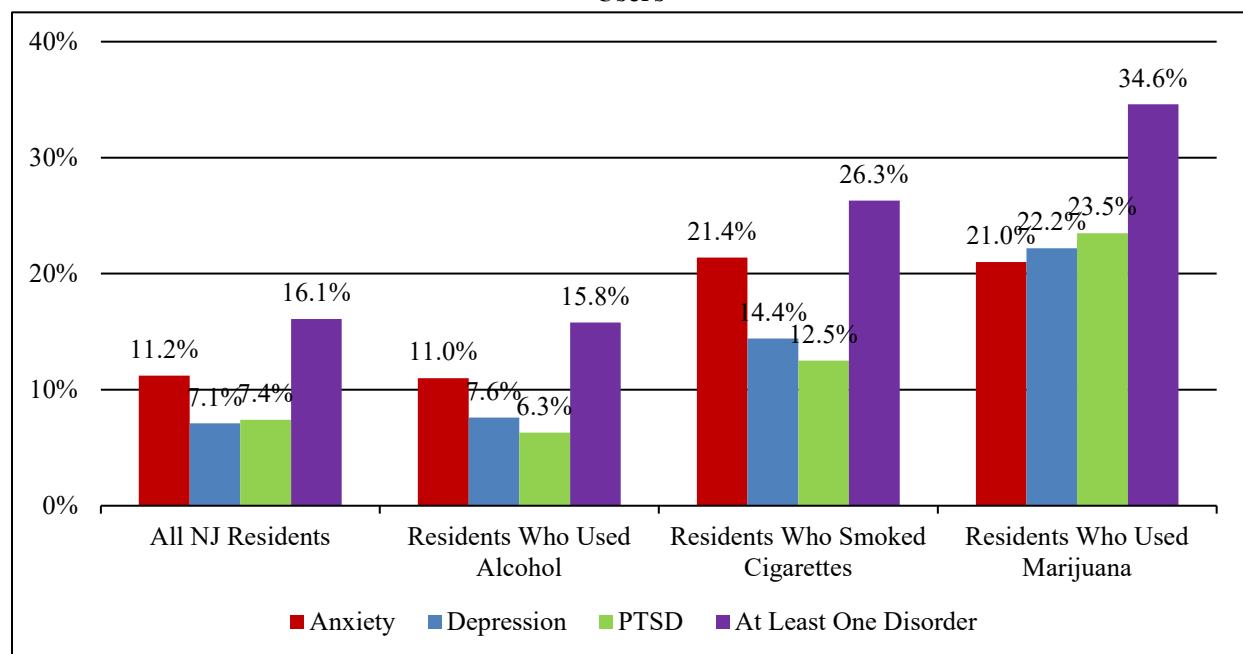


C2. Prevalence of Mental Health Disorders among Residents Using Alcohol, Nicotine and Illicit Drugs

Past 30 Day Users of Alcohol, Tobacco Cigarettes and Marijuana (Figure 7-9)

- Overall current cigarette smokers and marijuana users, but not alcohol users, were more likely than the general population to screen positive for a mental health disorder.
- Current marijuana users were the most likely of the three substance-using groups to screen positive for at least one mental health disorder (35%), followed by nicotine users (26%). Current alcohol users, however, had overall positive screening rates comparable to those of the general population (16%).
- The rate of positive screens for anxiety in cigarette smokers and marijuana users (21% in both groups), was nearly twice as high as the 11% positive anxiety screening rate found in alcohol users and the general population.
- Marijuana users had the highest rates of positive screens for depression (22%) and PTSD (24%). Rates of depression and PTSD were also elevated in cigarette smokers (14% and 13%, respectively) compared to rates found in current alcohol users (8% and 6%, respectively) and in the New Jersey population as a whole (7% for both disorders).

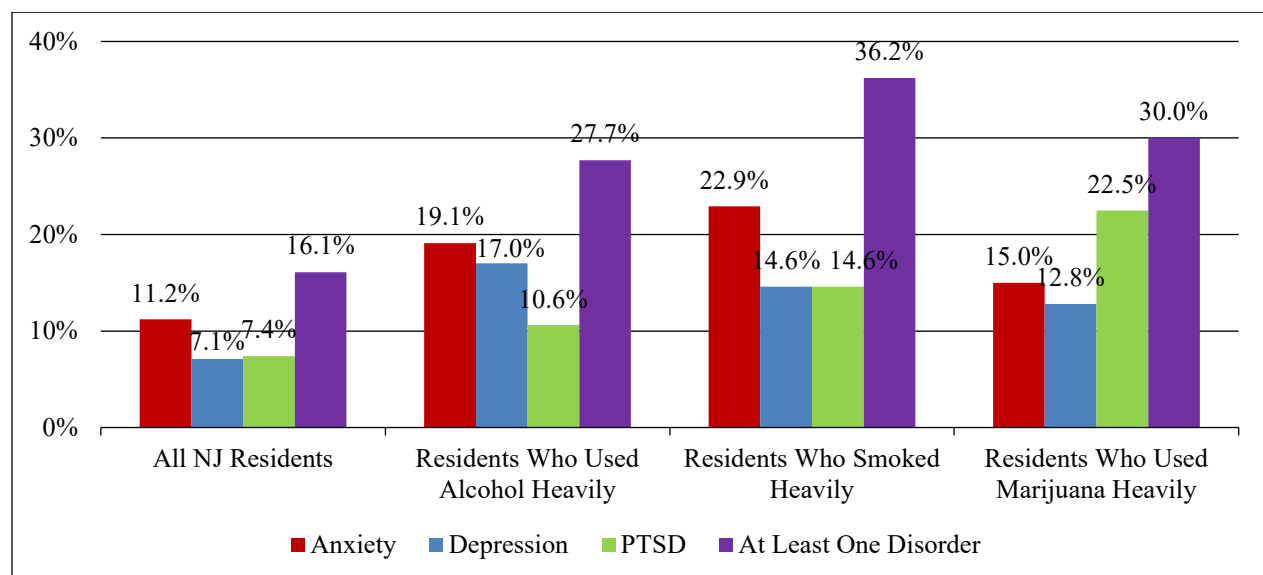
Figure 7-9: Prevalence of Positive Screens for Anxiety, Depression, PTSD and at Least One Mental Health Disorder among Past 30-Day (Current) Alcohol Users, Cigarette Smokers and Marijuana Users



Heavy Users of Alcohol, Cigarettes and Marijuana

- When prevalence rates of mental health symptoms were examined among heavy users of alcohol, cigarettes and marijuana, heavy alcohol users were similar to heavy cigarette smokers and heavy marijuana users in their risk of mental health symptoms.
- The highest prevalence of one or more positive mental health screens was found among heavy smokers (36%), who had almost three times the risk of having a positive screen as the general population (16%). The prevalence of one or more positive screens in heavy marijuana and alcohol users was similarly elevated over general population rates (30% and 28%, respectively).
- Heavy smokers were also at the highest risk for anxiety (23%), compared to heavy alcohol users (19%), heavy marijuana users (15%) and the general population (11%).
- Heavy marijuana users were the most likely of all groups to screen positive for PTSD (23%), compared to 15% of heavy smokers, 11% of heavy alcohol users and 7% of the general population.
- Rates of depression in heavy alcohol users (17%), heavy smokers (15%) and heavy marijuana users (13%) were about twice as high as the 7% prevalence found in the general population.

Figure 7-10: Prevalence of Positive Screens for Anxiety, Depression, PTSD and at Least One Mental Health Disorder among Heavy Alcohol Users, Cigarette Smokers and Marijuana Users



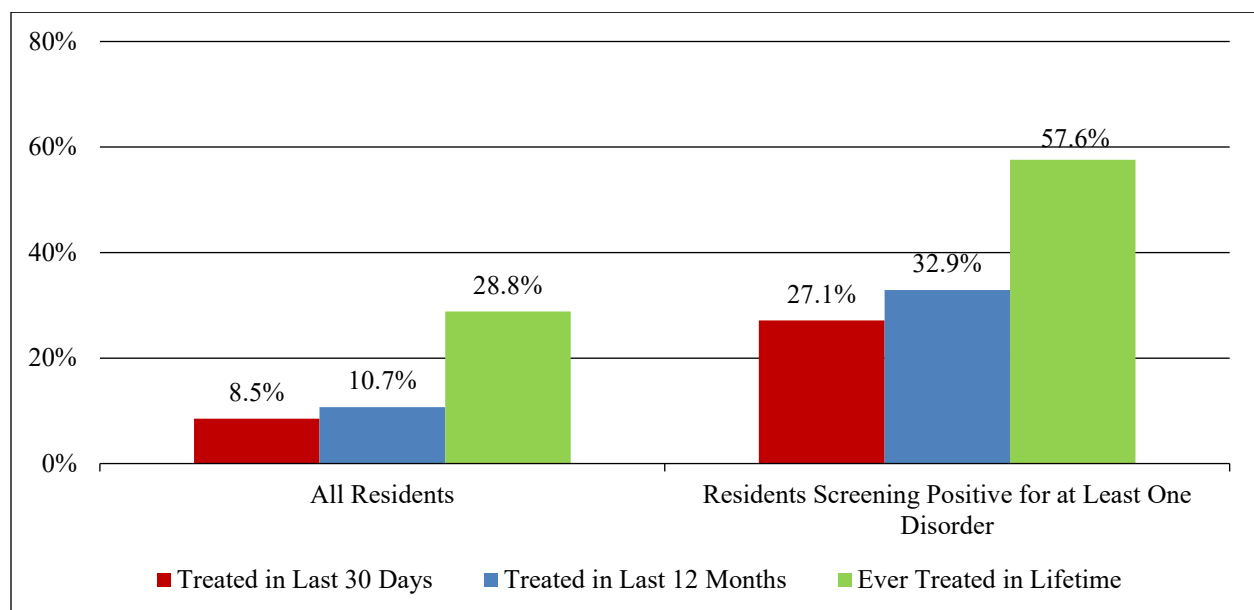
D. MENTAL HEALTH TREATMENT

Overall, 29% of all New Jersey residents reported receiving some form of mental health treatment (including inpatient, outpatient and/or medication) in their lifetimes, 11% received some treatment in the last 12 months and 9% in the last 30 days. The following section examines treatment access by mental health screening status, the types of treatment received by those with positive mental health screens, and demographic differences in treatment access among those screening positive for a mental health disorder.

D1. Mental Health Treatment Utilization: All New Jersey Residents and Residents Screening Positive for a Mental Health Disorder Treatment Utilization by Time Frame (Figure 7-11)

- Not surprisingly, those screening positive for mental health disorders were more likely than New Jersey residents as a whole to have received some form of mental health treatment in their lifetimes as well as in the past 30 days and past year.
- Among all residents, 29% had received mental health treatment in their lifetimes, 11% in the last year and 9% in the last 30 days. In contrast, among those with one or more positive screens for anxiety, depression or PTSD, 58% had received treatment in their lifetimes, 33% in the last 12 months and 27% in the last 30 days.

Figure 7-11: Receipt of Mental Health Treatment: All Residents and Residents Screening Positive for a Mental Health Disorder

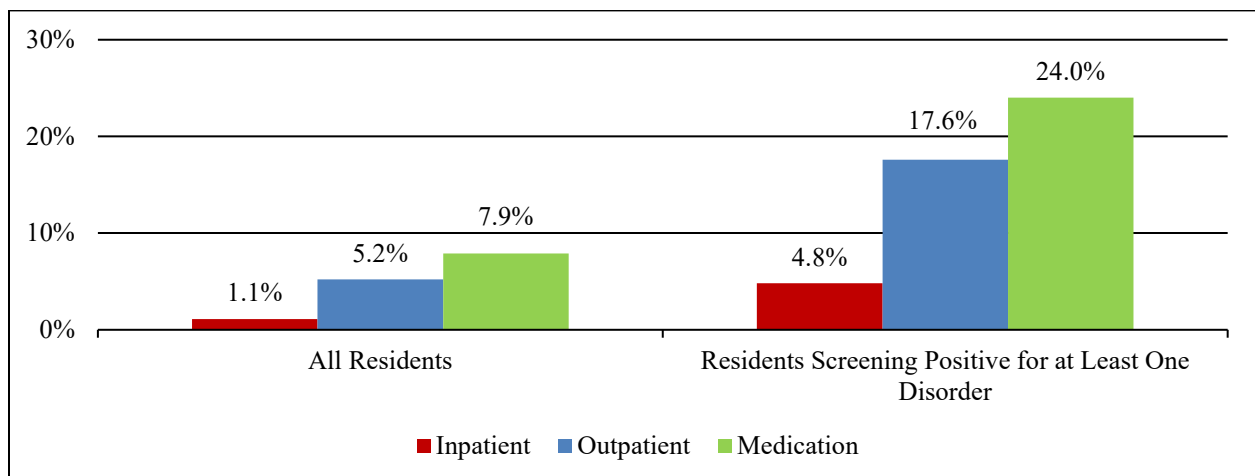


- When treatment access was examined among residents who screened positive for both a mental health disorder and substance abuse or dependence, those with positive screens for co-occurring mental health and substance use problems were no more likely to have received mental health treatment in the past month or year than those with positive screens for a mental health problem only.
- However, those with positive co-occurring disorder screens were somewhat more likely to report lifetime mental health treatment than those with positive mental health screens only (62% vs. 57%).

Type of Treatment Received in the Last 12 Months (Figure 7-12)

- Medication was the most common treatment received in the last 12 months by all residents (8%) and by those screening positive for a mental health disorder (24%).
- Outpatient treatment was the second most commonly utilized mental health treatment, with 5% of all residents and 18% of those with positive mental health screens reporting outpatient treatment in the last 12 months.
- Inpatient treatment was the least frequently accessed form of treatment, reported by only 1% of all residents and 5% of those with positive mental health screens.

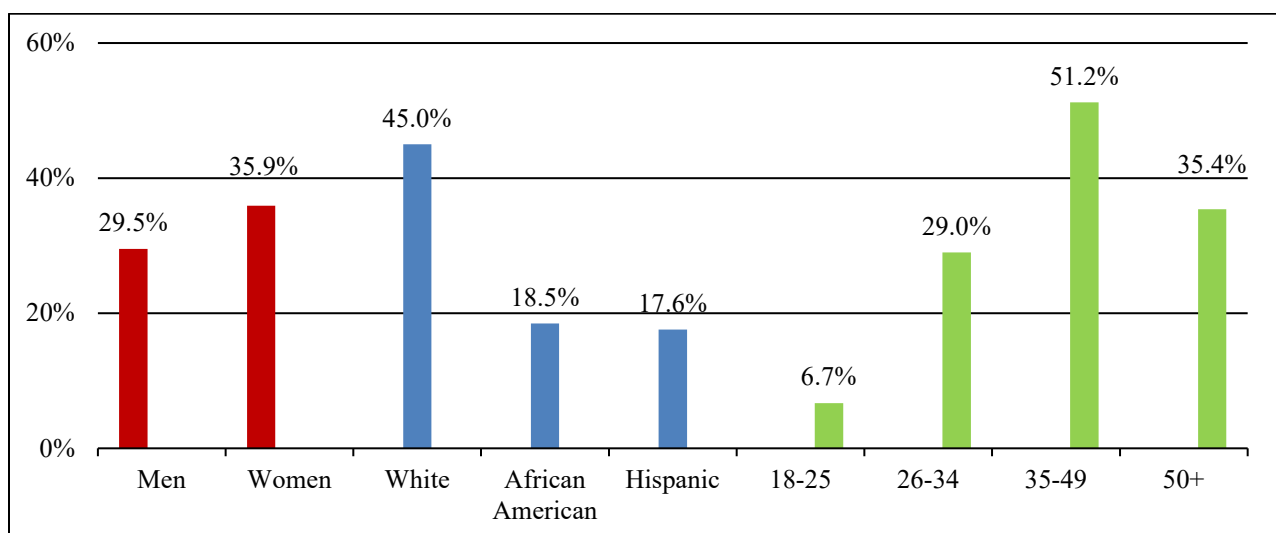
Figure 7-12: Type of Mental Health Treatment Received in the Last 12 Months: All New Jersey Residents and Residents Screening Positive for a Mental Health Disorder



D2. Demographic Differences in Treatment Utilization in the Last 12 Months among New Jersey Residents with Positive Mental Health Screens: Gender, Race/Ethnicity and Age (Figure 7-13)

- An examination of demographic differences in mental health treatment utilization among residents who screened positive for mental health disorders revealed substantial disparities in treatment access by both race/ethnicity and age.
- By race/ethnicity (Figure 7-13), White residents were substantially more likely than African Americans and Hispanics to have obtained mental health treatment in the last year, with 45% of Whites vs. 19% of African Americans and 18% of Hispanics reporting treatment access.
- There were also large age disparities in treatment access, with the youngest age group being the least likely of all residents with positive mental health screens to obtain treatment (Figure 7-13). Only 7% of those aged 18 to 25 reported having obtained treatment in the past year, compared to 29% of those aged 26 to 34 and 51% of those aged 35 to 49. After age 49, the rate of treatment declined somewhat, dropping to 35% among those aged 50 and older.
- With respect to gender, women were somewhat more likely than men to have accessed treatment in the last year (36% vs. 30%).

Figure 7-13: Access to Mental Health Treatment in the Last 12 Months by Gender, Race/Ethnicity and Age: New Jersey Residents Screening Positive for at Least One Mental Health Disorder



Education, Employment and Income (Table 7-2)

- With respect to other demographic characteristics, there was a disparity in treatment access by education status, with college graduates being more likely to report past-year treatment (50%) than those with less than a college education (28% - 30%).

Table 7-2: Mental Health Treatment Received in Last 12 Months by New Jersey Residents Screening Positive for Mental Health Disorders

Demographics			Percent Treated in the Last 12 Months (%)
New Jersey Residents Screening Positive for One or More Mental Health Disorders n=170			32.3
Education Status	High School Graduate or Less	n=88	28.4
	Some College	n=53	30.2
	College Graduate or Better	n=28	50.0
Employment	Employed Full-Time or Part-Time	n=88	22.7
	Unemployed/Retired/Disabled/Other	n=81	43.2
Income	Under \$50,000	n=73	32.9
	\$50,000-\$99,000	n=45	31.1
	\$100,000+	n=23	34.8

- By employment status, higher rates of treatment were reported among the unemployed retired/disabled or others out of the work force (43%) than among those working full-time or part-time (23%).
- There were no substantial differences in access to treatment by income among those screening positive for a mental health disorder. Thus, treatment was obtained by about 33% of those earning less \$50,000 per year and by 35% of those earning \$100,000 or more.

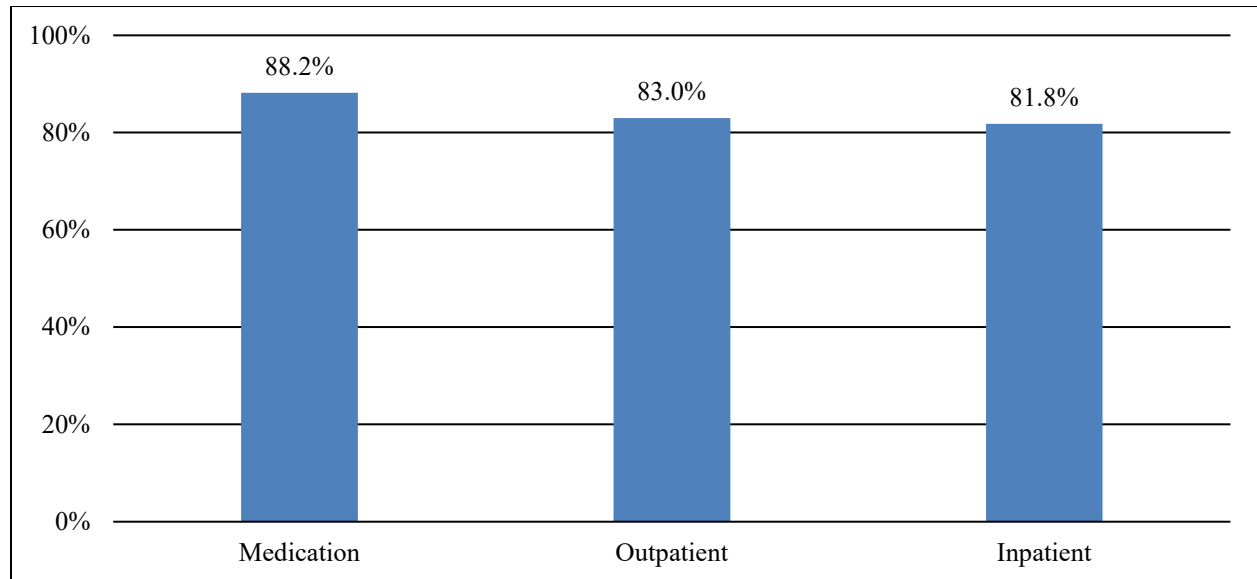
D3. Mental Health Treatment Insurance Coverage

Among residents screening positive for a mental health disorder, 81% of all those who were treated in the last 12 months reported that some or all of their treatment was paid for by health insurance. Insurance payment for treatment, however, varied according to the type of treatment received and the type of health insurance coverage respondents had.

Treatment Type (Figure 7-14)

- By type of treatment received, respondents were somewhat more likely to report that insurance paid for their treatment if they received medication (88%), than if they received outpatient (83%) or inpatient (82%) treatment.

Figure 7-14: Proportion of Treated Residents Reporting at Least Some Mental Health Insurance Coverage for Their Treatment in the Last 12 Months, by Type of Treatment Received

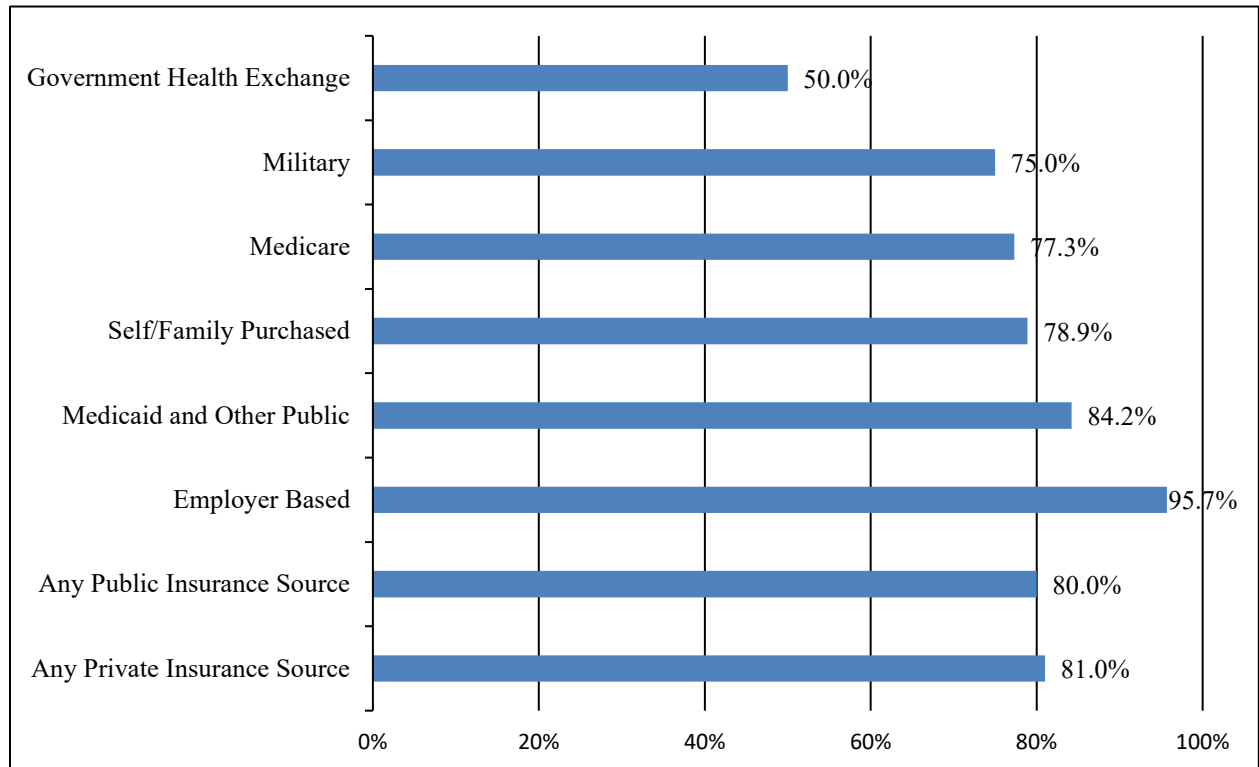


Health Insurance Type (Figure 7-15)

- Overall, public and private health insurance plans were about equally likely to cover some or all of the cost of mental health treatment, with 81% of those with some type of private plan, and 80% of those with some type of public plan, reporting some insurance coverage for their last episode of mental health treatment.
- There was a substantial difference in coverage for treatment by health insurance type within the range of public and private plans, however. In general, respondents with employer-based plans were the most likely to report having their mental health treatment covered by insurance, with 96% reporting coverage for some or all of their treatment.
- Residents with Affordable Care Act (ACA) plans purchased on the Government Health Exchange, in contrast, were the least likely to report insurance coverage for mental health treatment (50%).

- Among respondents with publicly-funded plans *other than* ACA plans (e.g. Medicare, Medicaid and Military plans) and among those with self-purchased plans not from the Health Exchange, about 75% to 85% reported partial or full coverage for their mental health treatment.

Figure 7-15: Proportion of Treated Residents Reporting at Least Some Insurance Coverage for Their Mental Health Treatment, by Type of Insurance



CHAPTER 8

GAMBLING

This chapter presents information on the prevalence of gambling among New Jersey residents and examines relationships between gambling and the use of tobacco, alcohol and drugs. It also examines relationships between gambling frequency and mental health status. The survey questioned state residents about the type and frequency of gambling they engaged in in the past 12 months. For the purpose of this report, we define frequent gambling as any type of gambling that occurs 50 times or more in the previous year. This definition is consistent with that of other national studies of gambling behavior, in which frequent gambling is defined as occurring approximately once per week or more (or 52+ times per year) (Welte, et al., 2011).

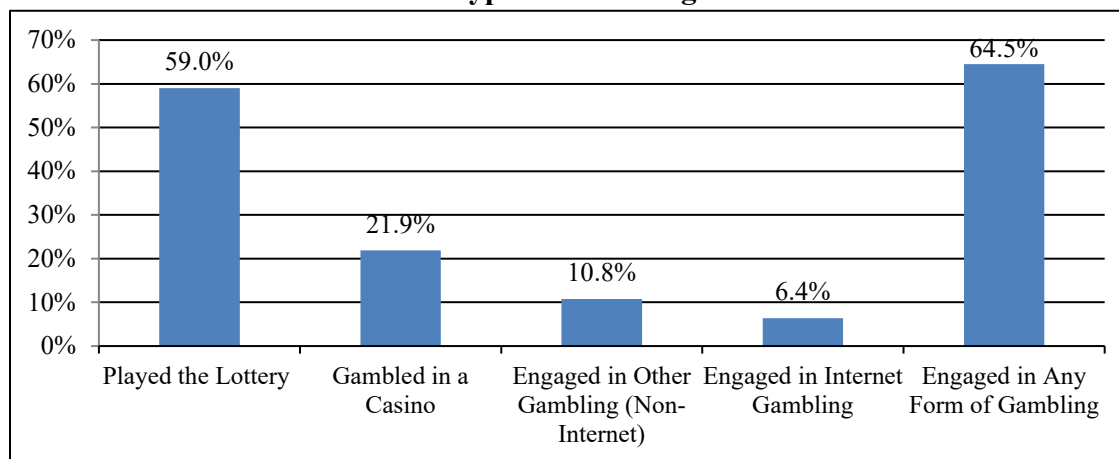
Frequent Gambling: Gambling 50 times or more in the past 12 months.

A. PREVALENCE AND FREQUENCY

Prevalence of Types of Gambling (Figure 8-1)

- About 65% of all New Jersey residents engaged in some form of gambling in the last 12 months.
- The most frequently reported type of gambling was playing the lottery, with 59% of residents reporting having bought at least one lottery ticket in the last year. Next in frequency was casino gambling, reported by 22% of residents.
- About 11% of residents engaged in other types of betting, such as horse racing or cards, and 6% engaged in internet gambling, such as internet casino games or other forms of online betting.

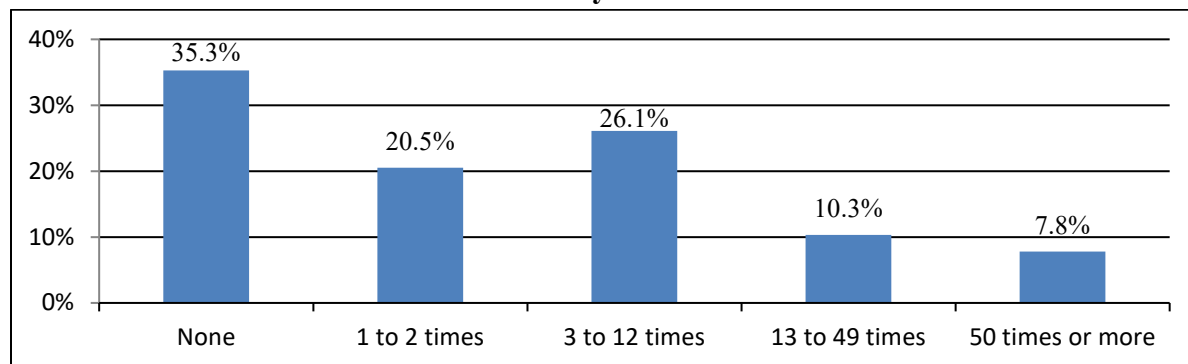
Figure 8-1. Proportion of New Jersey Residents Who Gambled in the Last 12 Months, by Type of Gambling



Frequency of Gambling in the Last 12 Months (Figure 8-2)

- About 47% of all residents gambled 12 or fewer times in the past year (or, about once per month or less), including 21% who gambled only one or two times in the previous year and about 26% who gambled from 3 to 12 times.
- About 18% gambled more than 12 times in the past year, including 10% who gambled from 13 to 49 times and 8% who were frequent gamblers (50+ gambling episodes in the last year).

Figure 8-2. Frequency of Engaging in Any Form of Gambling in the Last 12 Months: New Jersey Residents



B. DEMOGRAPHIC CHARACTERISTICS OF GAMBLERS AND FREQUENT GAMBLERS

Gender, Age and Race/Ethnicity (Table 8-1)

- Men were more likely than women to have gambled in the past year (70% vs. 60%) and somewhat more likely than women to be frequent gamblers (9% vs. 7%).
- By age, those in the youngest age group were the least likely of all age groups to gamble or gamble frequently, with about 36% of 18 to 20 year olds reporting any gambling in the previous year and 5% reporting frequent gambling. In contrast, any gambling was reported by 62% to 68% of those over age 20, and frequent gambling, by 6% to 10%.
- White and African American residents were the most likely of all racial/ethnic groups to have gambled in the last year (71% and 64%, respectively) and to have gambled frequently (10% and 9%, respectively). Only 51% and 50% of Hispanics and Asians, respectively, reported past-year gambling and less than 2% of either racial/ethnic group gambled frequently.

Table 8-1: Demographic Characteristics of All Gamblers and Frequent Gamblers (50+ Times) in the Last 12 Months: New Jersey Residents

Demographics			Residents Who Engaged in Any Form of Gambling (%)	Frequent Gamblers (%)
New Jersey Total Population (n=1052)			64.5	7.8
Gender	Males	(n=504)	69.6	8.9
	Females	(n=547)	59.8	6.6
Age	18-20	(n=67)	36.4	4.5
	21-25	(n=78)	61.5	7.6
	26-34	(n=147)	66.0	5.5
	35-49	(n=278)	64.9	6.5
	50+	(n=463)	67.8	9.5
Race/ Ethnicity	White	(n=631)	71.1	9.8
	Black	(n=135)	63.7	8.9
	Hispanic	(n=180)	50.8	1.7
	Asian	(n=80)	50.0	1.3
Marital Status	Married	(n=594)	67.8	7.2
	Never Married	(n=279)	57.4	7.9
	Divorced/Sep.	(n=110)	68.5	8.1
	Widowed	(n=59)	59.3	6.8
Education	Less than H.S.	(n=120)	44.6	3.3
	H.S. Grad.	(n=298)	62.5	11.7
	Some College	(n=273)	71.8	7.7
	College Grad.	(n=360)	66.9	5.8
Employment Status	Employed Full-Time	(n=509)	73.8	9.1
	Employed Part-time	(n=166)	51.2	6.0
	Unemployed	(n=35)	50.5	2.1
	Retired/Disabled	(n=213)	63.7	10.3
Income	Under \$25,000	(n=172)	46.8	4.1
	\$25,000-49,999	(n=150)	57.3	8.7
	\$50,000-79,999	(n=172)	72.9	12.2
	\$80,000-99,999	(n=106)	79.2	4.8
	\$100,000 and over	(n=285)	75.2	10.9

Marital Status, Education, Employment Status and Income (Table 8-1)

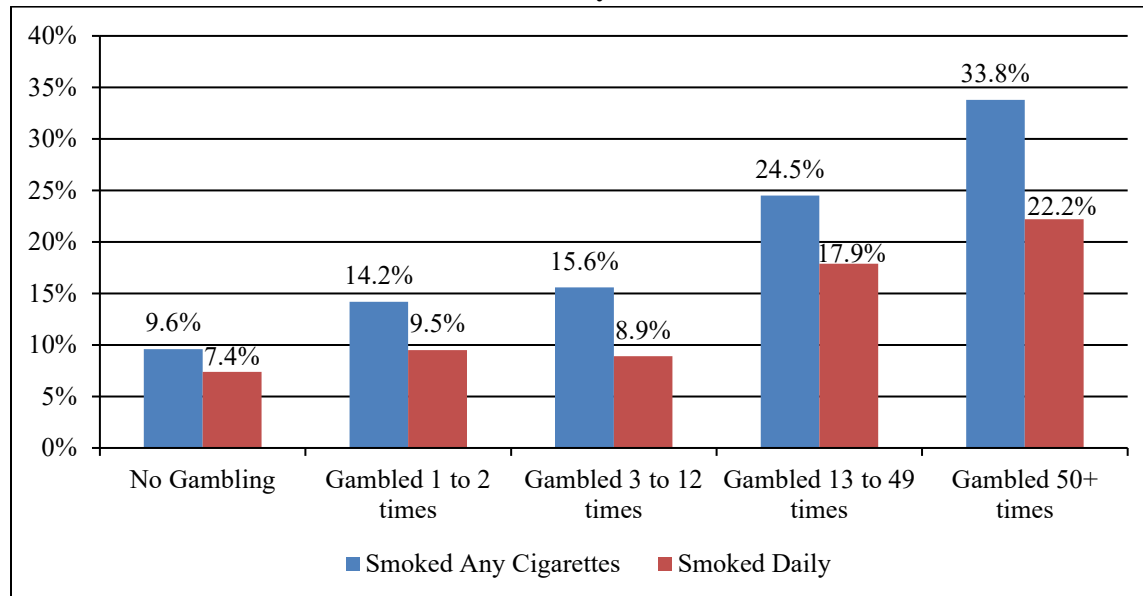
- Married and separated/divorced residents were the most likely of all marital groups to have gambled in the previous year (68% and 69%, respectively). About 57% of the never married and 59% of widowed residents reported past-year gambling.
- There were few differences in frequent gambling across marital groups, with 7% to 8% of all groups reporting gambling frequently.

- The highest rate of past-year gambling was reported by residents with some college education (72%) followed by college graduates (67%). High school graduates were next in likelihood of past year gambling (63%), while residents with less than a high school education had the lowest gambling rate (45%).
- With respect to frequent gambling, however, high school graduates were the most likely of all educational groups to gamble frequently (12%) and those with less than a high school education, the least likely (3%). Frequent gambling was reported by 8% of those with some college education and 6% of the college educated.
- Residents with full time employment reported the highest prevalence of gambling (74%) and those who worked part-time or were unemployed, the lowest (51% each). Residents who were retired or disabled were second in gambling frequency (64%).
- In terms of frequent gambling, 10% of the retired/disabled and 9% of full-time workers reported gambling 50 times or more in the past year. Frequent gambling was reported by 6% of part-time workers and only 2% of the unemployed.
- By income, those with household incomes between \$80,000-\$99,999 and \$100,000 or more were the most likely to engage in any gambling (79% and 75%, respectively), and those with incomes under \$25,000 were the least likely to gamble (47%). About 73% of those earning \$50,000- \$79,999 and 57% of those earning \$25,000-\$49,999 reported any gambling in the previous year.
- Frequent gamblers were most likely to be found among those earning \$50,000-\$79,999 (12%) and those earning \$100,000 or more (11%). Those earning under \$25,000 were the least likely to gamble frequently (4%).

C. FREQUENCY OF GAMBLING AND CIGARETTE SMOKING

- Overall, the prevalence of any cigarette smoking and daily smoking increased substantially with the frequency of gambling (Figure 8-3).
- Among residents who did not gamble in the past year, 10% smoked cigarettes and 7% smoked daily.
- Among frequent gamblers, in contrast, 34% smoked cigarettes and 22% smoked daily.

Figure 8-3. Past 30-Day Cigarette Smoking by Frequency of Gambling in the Last 12 Months: New Jersey Residents

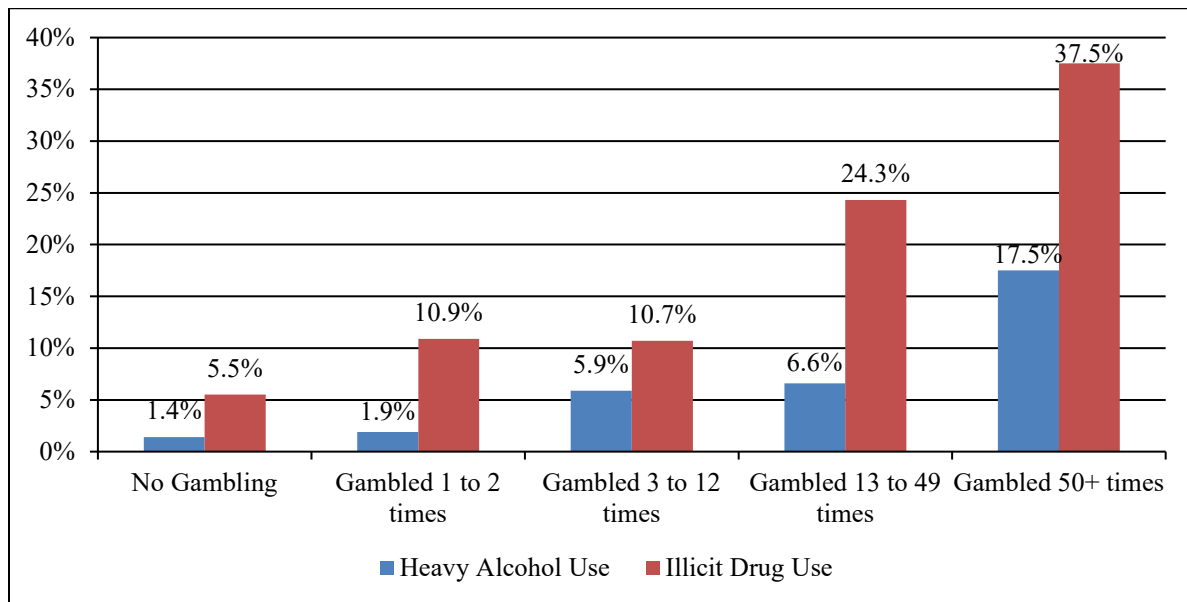


D. FREQUENCY OF GAMBLING AND THE USE OF DRUGS AND ALCOHOL

Heavy Drinking and Illicit Drug Use

- Both heavy alcohol use and illicit drug use in the past year increased substantially with an increase in the frequency of past-year gambling (Figure 8-4).
- Among non-gamblers, 1% engaged in heavy drinking in the past year. Among those who gambled frequently, however, 18% reported heavy alcohol use.
- Similarly, illicit drug use increased from 6% among non-gamblers to 38% among those who gambled frequently.

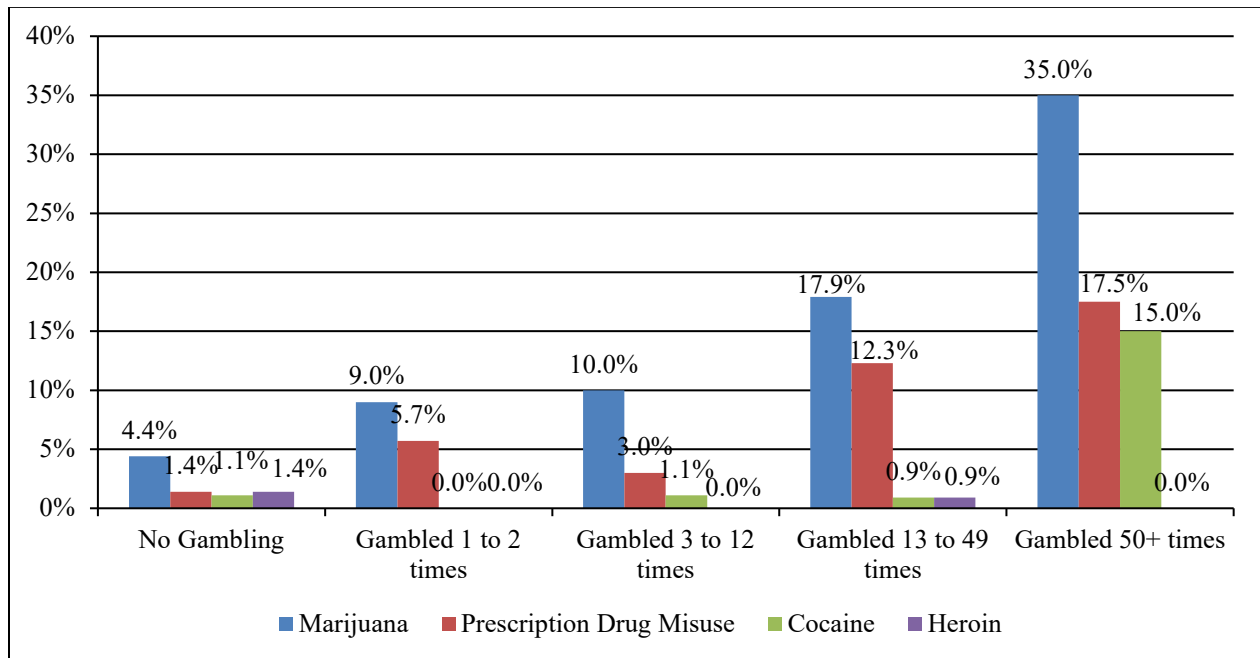
Figure 8-4. Past 12-Month Heavy Alcohol Use and Illicit Drug Use by Frequency of Gambling in the Last 12 Months: New Jersey Residents



Types of Illicit Drugs Used (Figure 8-5)

- An increase in the use of all types of drugs except heroin was associated with increases in the frequency of past-year gambling.
- Both marijuana use and the misuse of psychotherapeutics increased substantially according to gambling frequency. When non-gamblers were compared to frequent gamblers, marijuana use increased from 4% to 35% and psychotherapeutic drug misuse from 1% to 18%.
- Cocaine use was also strongly associated with gambling frequency, increasing from 1% among non-gamblers to 15% among frequent gamblers.
- Heroin use, however, was unrelated to gambling frequency, remaining at 1% or less of all residents, regardless of how often they gambled in the previous year.

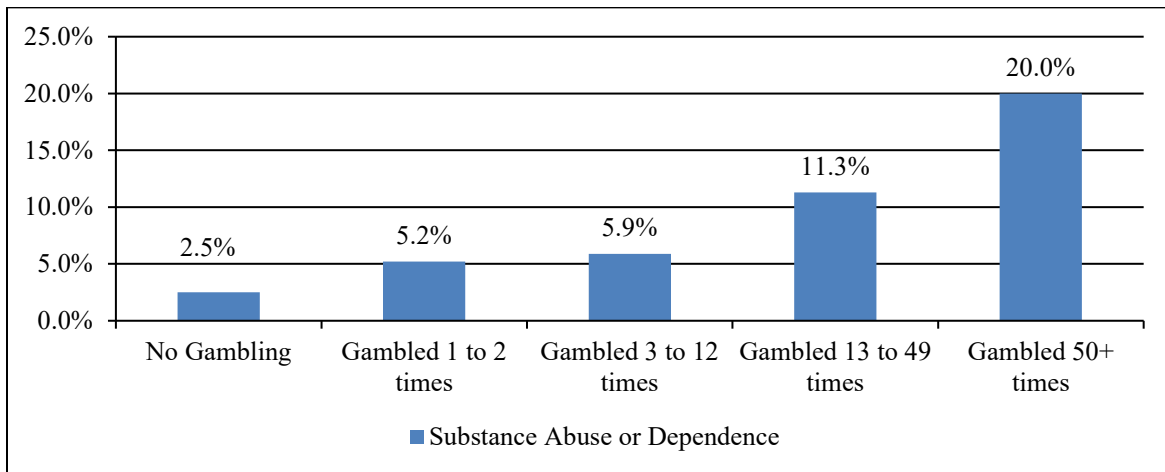
Figure 8-5 Past 12 Month Use of Marijuana, Psychotherapeutics, Cocaine and Heroin by Frequency of Gambling: New Jersey Residents



Substance Abuse and Dependence (Figure 8-6)

- Not surprisingly, frequent gambling was also associated with higher rates of substance abuse and dependence.
- About 3% of non-gamblers screened positive for alcohol or drug dependence in the previous year. In contrast, rates of substance abuse or dependence were 20% among those who gambled frequently in the past year.

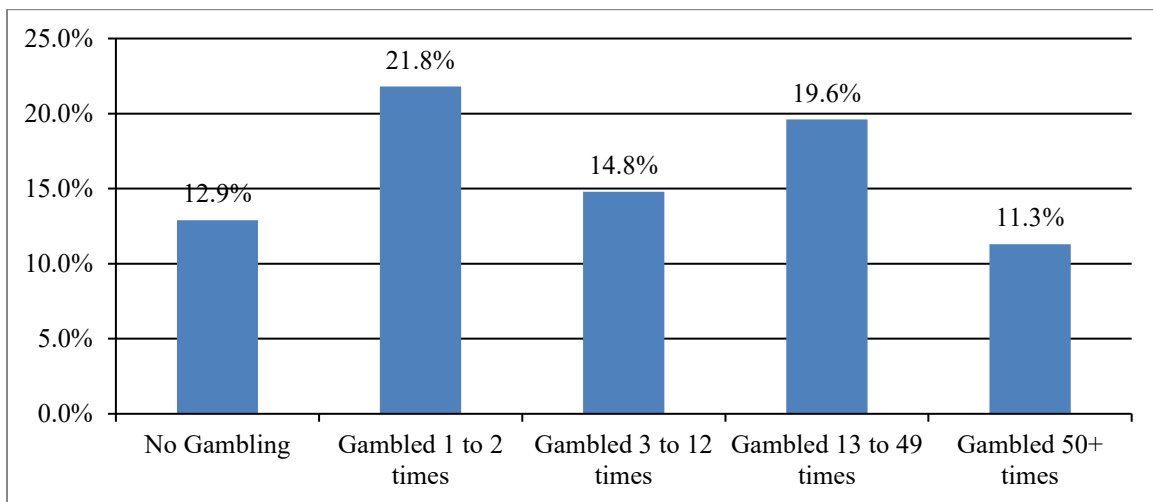
Figure 8-6. Proportion of Residents Screening Positive for Substance Abuse or Dependence by Frequency of Gambling: New Jersey Residents



E. FREQUENCY OF GAMBLING AND MENTAL HEALTH STATUS (Figure 8-7)

- Unlike relationships between gambling and the use of substances, there was no relationship between gambling frequency and mental health status with respect to any of the mental health disorders assessed in this survey (anxiety, depression and PTSD).

Figure 8-7. Proportion of Residents Screening Positive for Any Mental Health Disorder (Anxiety, Depression and/or PTSD), by Frequency of Gambling in the Last 12 Months: New Jersey Residents



CHAPTER 9

REGIONAL VARIATIONS IN SUBSTANCE USE, MENTAL HEALTH AND TREATMENT ACCESS

A. INTRODUCTION

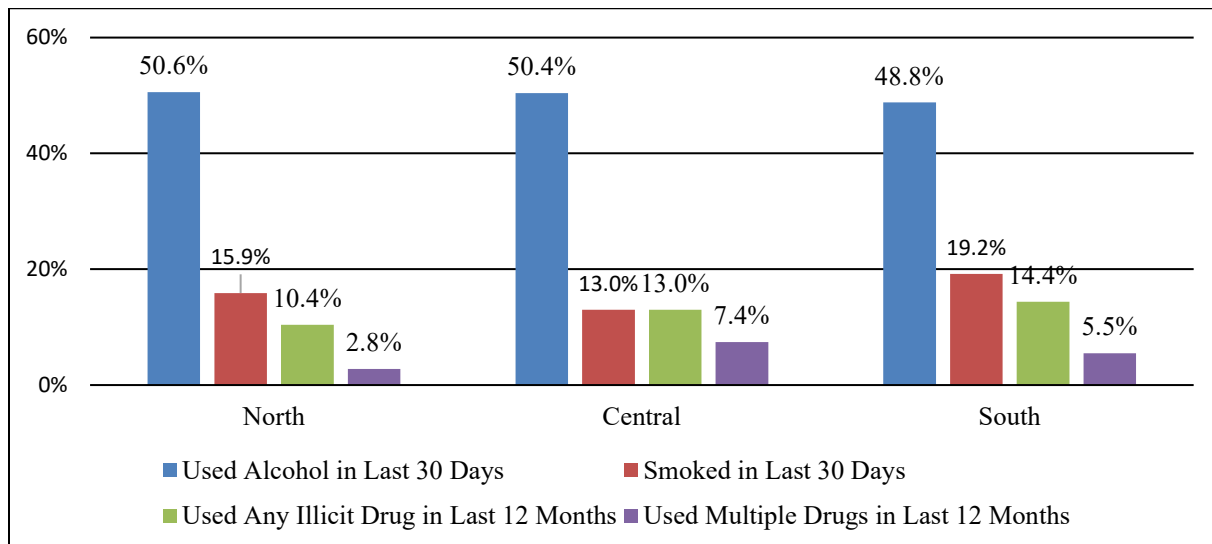
This section reports on regional variations in substance use, mental health symptoms and access to substance abuse and mental health treatment. With respect to substance use, we first examine regional differences in alcohol use, cigarette smoking and illicit drug use, exploring variations across regions in the overall use of illicit drugs as well as in the types of drugs used. Next, we examine regional differences in the rates of substance abuse/dependence, both overall and with respect to abuse/dependence type (i.e. alcohol only, drugs only or both alcohol and drugs). In terms of mental health, we examine differences across regions in the proportion of residents screening positive for anxiety, depression and PTSD. Finally, we report on regional differences in access to mental health and substance abuse treatment by residents likely to need treatment (i.e. residents who screen positive for substance abuse/dependence or who screen positive for one or more mental health disorders).

B. SUBSTANCE USE, ABUSE AND DEPENDENCE

Current Alcohol Use, Current Cigarette Smoking and Past-Year Illicit Drug Use (Figure 9-1)

- There were no regional differences in current drinking, with 49% to 51% of residents in each region reporting alcohol use in the last 30 days.
- Residents of South Jersey had the highest prevalence of current cigarette smoking of the three regions, with 19% reporting current smoking compared to 16% of North Jersey residents and 13% of Central Jersey residents.
- Residents of South and Central Jersey had higher overall rates of past-year illicit drug use (14% and 13%, respectively) than residents of North Jersey (10%).
- Central and South Jersey residents were also more likely to have used multiple drugs in the past year (7% and 6%, respectively) than North Jersey residents (3%).

Figure 9-1: Current Alcohol Use, Current Cigarette Smoking and Use of Illicit Drugs in the Last 12 Months, by State Region

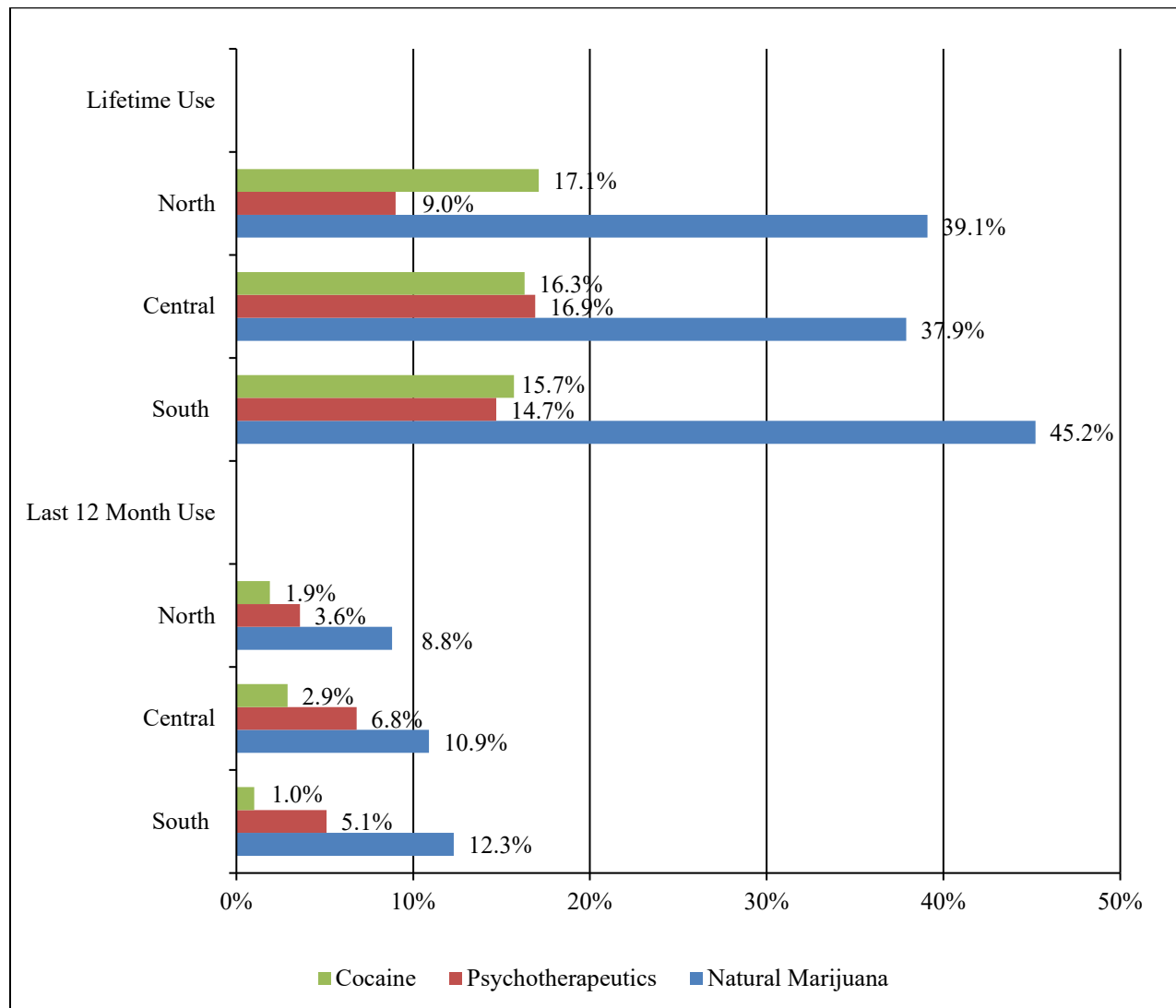


Illicit Drug Use: Variations in Specific Drugs Used Across Regions

Natural Marijuana, Psychotherapeutics and Cocaine (Figure 9-2)

- South Jersey residents had the highest rates of lifetime and past-year use of natural marijuana of all state regions, with 45% of South Jersey residents using marijuana in their lifetime and 12%, in the past year. In contrast, in Central Jersey, the prevalence of lifetime and past-year use of marijuana was 38% and 11%, respectively, and in North Jersey, 39% and 9%, respectively.
- Central Jersey residents were more likely than other state residents to misuse psychotherapeutic drugs in their lifetime (17%) and in the past year (7%). Lifetime and past-year misuse of psychotherapeutics in North Jersey was 9% and 4%, respectively, and in South Jersey, 15% and 5%, respectively.
- Lifetime use of cocaine was similar across all three state regions, reported by 17% of North Jersey residents and 16% of residents in Central and South Jersey. Past year use was reported by 3% of Central Jersey residents, 2% of North Jersey residents and 1% of residents in South Jersey.

Figure 9-2: Lifetime and Past 12 Month Use of Marijuana, Psychotherapeutics and Cocaine, by Region

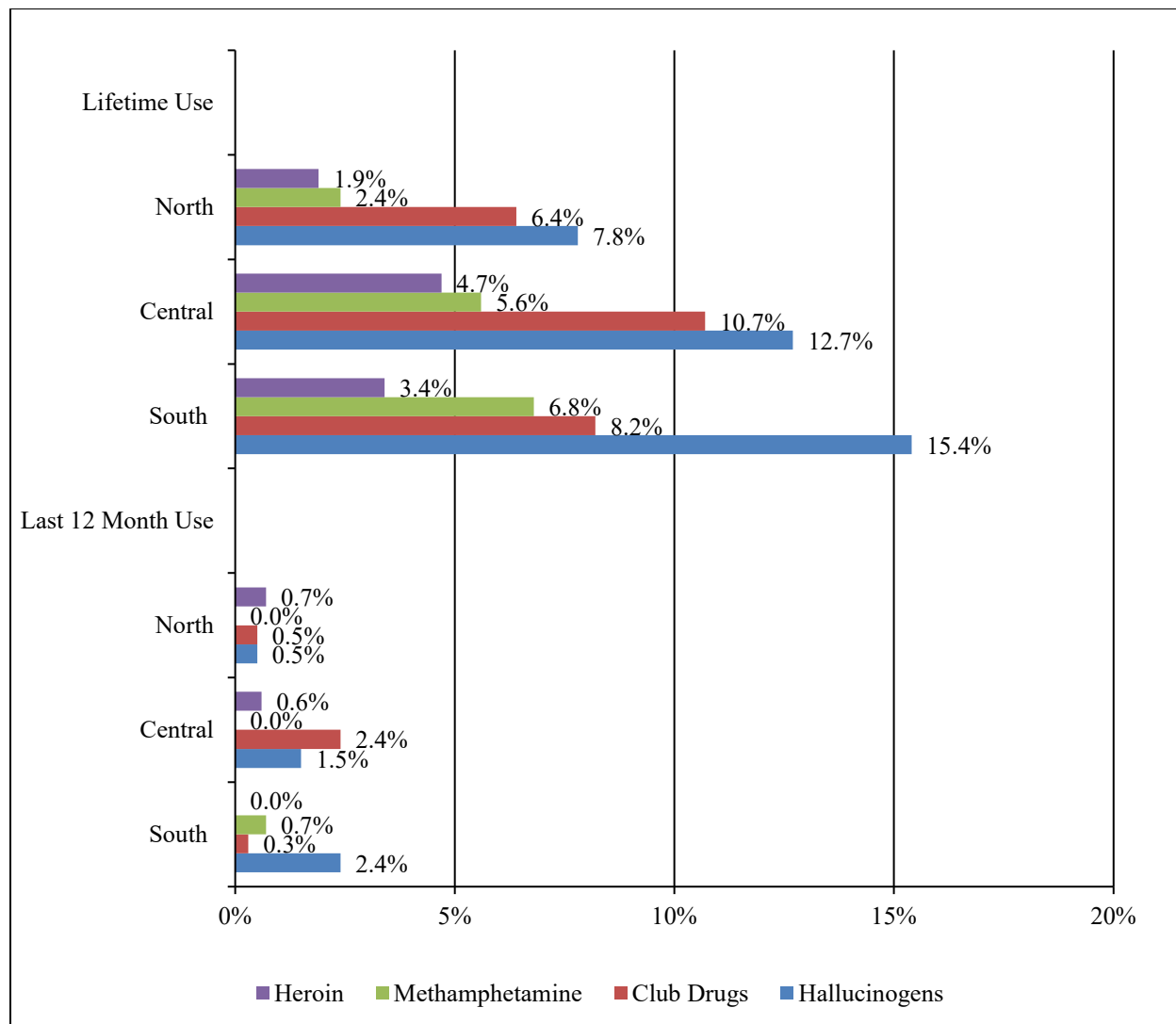


Heroin, Methamphetamines, Club Drugs and Hallucinogens (Figure 8-3)

- South and Central Jersey had substantially higher rates of lifetime and past 12-month use of hallucinogens than North Jersey residents, with 15% and 13% of South and Central Jersey residents, respectively, reporting lifetime use and 2% of residents in each region reporting past-year use. In contrast, 8% of North Jersey residents reported lifetime use and less than 1%, use in the last 12 months.

- Central Jersey residents reported the highest prevalence of club drug use, with 11% reporting lifetime use and 2%, past 12-month use. Lifetime use of club drugs was reported by 8% and 6% of South and North Jersey residents, respectively, and past 12-month use by less than 1% of residents of South and North Jersey.
- Residents in all three regions reported low use of methamphetamines and heroin. Between 6% and 7% of residents in all regions reported lifetime methamphetamine use and less than 1%, use in the last 12 months. Similarly, lifetime heroin use was reported by 2% to 5% of residents across regions, with less than 1% reporting past-year use.

Figure 9-3: Lifetime and Past 12 Month Use of Hallucinogens, Club Drugs, Methamphetamines and Heroin, by Region



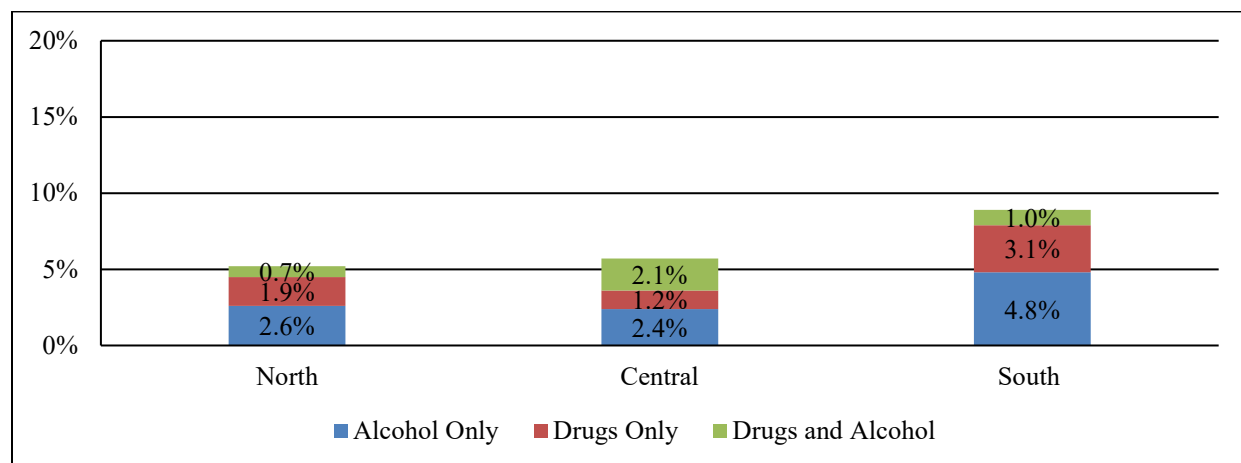
Synthetic Marijuana

- Central Jersey residents were about twice as likely as other New Jersey residents to have used synthetic marijuana in their lifetimes. Thus, more than 16% of residents in this region reported lifetime synthetic marijuana use, compared to 7% of residents in South Jersey and 9% of residents in North Jersey. Past 12 month use of synthetic marijuana was not measured in the current survey.

Substance Abuse and Dependence (Figure 9-4)

- By region, residents of South Jersey were somewhat more likely than residents of North or Central Jersey to meet screening criteria for substance abuse or dependence (9% vs. 5% of residents in Northern New Jersey and 6% of residents in Central New Jersey).
- By substance type, residents in all New Jersey regions were most at risk for alcohol problems only, with South Jersey having the highest rate of alcohol-only problems (5% vs. 3% for North Jersey and 2% for Central Jersey).
- South Jersey residents were also somewhat more likely to screen positive for drug problems only than residents in the other two regions (3% vs. 1% in Central Jersey and 2% in North Jersey).
- Residents of Central Jersey had a somewhat higher rate of positive screens for co-occurring drug and alcohol problems (2%) than residents of South Jersey (1%) or North Jersey (less than 1%).

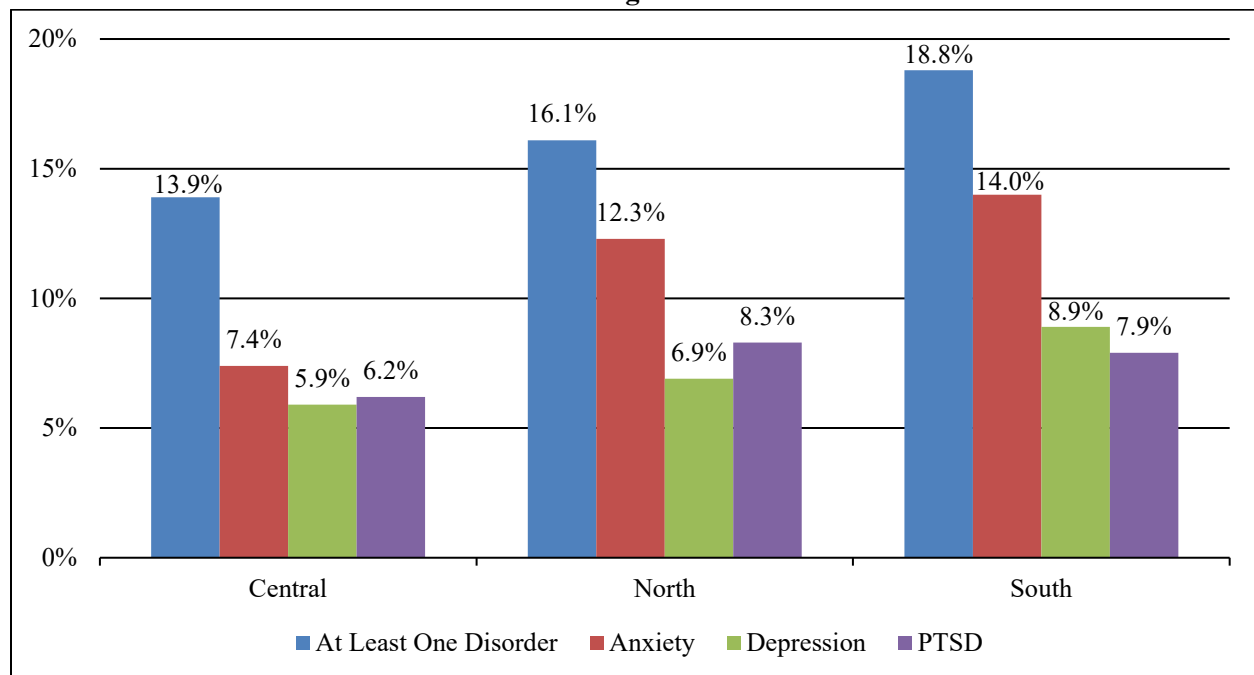
Figure 9-4: Proportion of Residents Screening Positive for Substance Abuse or Dependence by Type of Substance and Region



C. MENTAL HEALTH (Figure 9-5)

- Overall, South Jersey residents had the highest rates of positive screens for mental health disorders and Central Jersey residents, the lowest. About 19% of South Jersey residents screened positive for at least one mental health disorder, followed by 16% of North Jersey residents and 14% of residents in Central Jersey.
- By specific disorder, South Jersey residents were more likely to screen positive for anxiety (14%) than North (12%) or Central (7%) Jersey residents. South Jersey residents also had the highest rate of positive screens for depression (9% vs. 7% in North Jersey and 6% in Central Jersey). South and North Jersey residents, however, had similar rates of PTSD (8%), with the lowest PTSD rate found among Central Jersey residents (6%).

Figure 9-5: Proportion of Residents Screening Positive for Anxiety, Depression and PTSD, by State Region

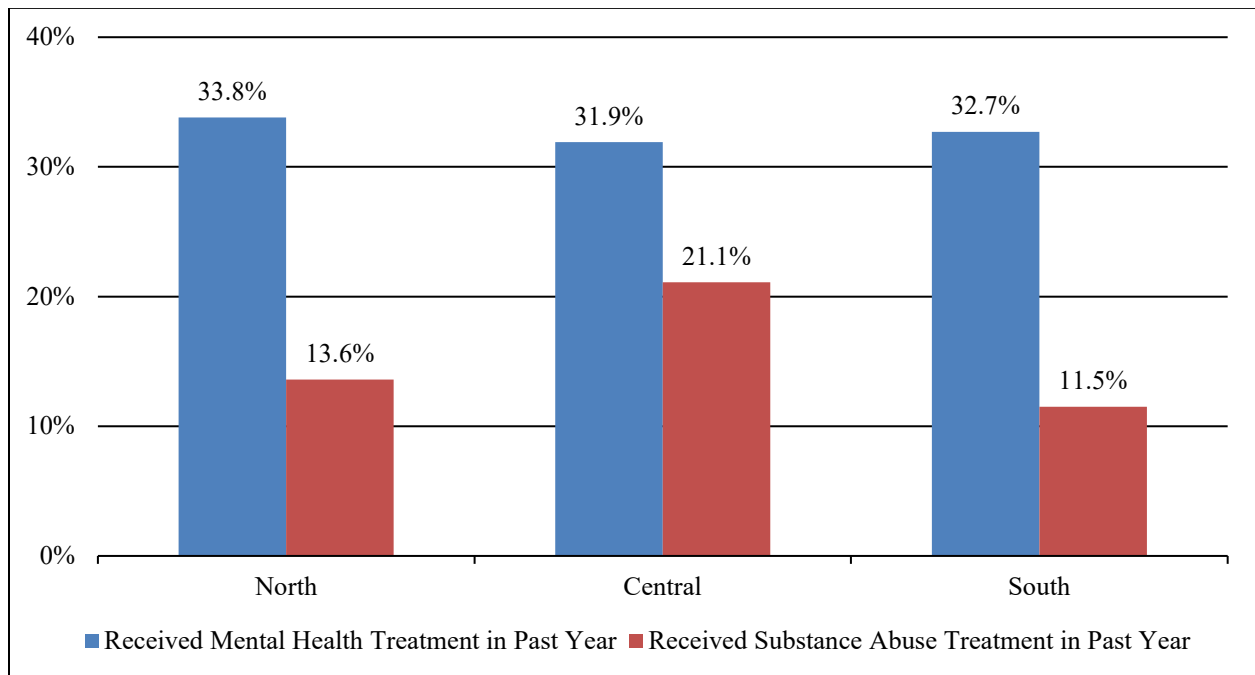


D. TREATMENT FOR MENTAL HEALTH SYMPTOMS AND SUBSTANCE ABUSE/DEPENDENCE (Figure 9-6)

- The proportion of residents with one or more positive mental health screens who were treated for mental health problems in the past year did not differ substantially across regions, ranging from 32% to 34%.

- Greater regional variation was found in access to substance abuse treatment in the past year among residents screening positive for substance abuse or dependence. Thus, although South Jersey had the highest rate of substance abuse/dependence of all New Jersey regions (9% vs. 5% and 6% for North and Central Jersey, respectively), it had the lowest rate of past year treatment, with only 12% of South Jersey residents being treated compared to 14% of North and 21% of Central Jersey residents.

Figure 9-6: Proportion of Residents with Mental Health Symptoms or Substance Abuse/Dependence Who Received Treatment in the Past 12 Months



CHAPTER 10

SUBSTANCE USE TRENDS: NEW JERSEY AND THE NATION

A. INTRODUCTION

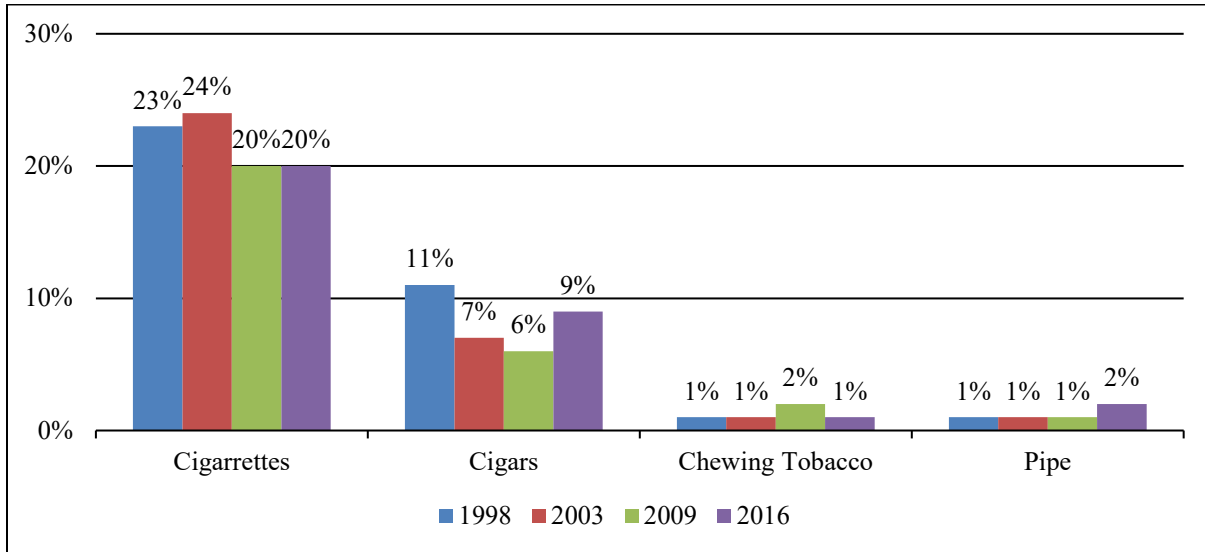
This chapter compares the 2016 New Jersey Drug Use and Health Survey to comparable data from the three prior statewide surveys conducted in 1998, 2003, and 2009. It also compares substance use trends in New Jersey to those in the nation, comparing the 2016 New Jersey data to the 2015 National Survey on Drug Use and Health (NSDUH) (Center for Behavioral Health Statistics and Quality, 2015). Because previously described methodological changes in the 2016 New Jersey survey affected both drug use reporting and calculations of substance abuse and dependence, we are limiting in-state comparisons to tobacco and alcohol use only, which were least affected by these changes. National comparisons, however, focus on the use of cigarettes, alcohol and illicit drugs as well as on the prevalence of substance abuse and dependence. We are able to retain these comparisons with national trends since the methodological changes in the 2016 New Jersey survey were designed to create greater comparability with the NSDUH.

B. NEW JERSEY TRENDS: 1998-2016

Use of Tobacco Products

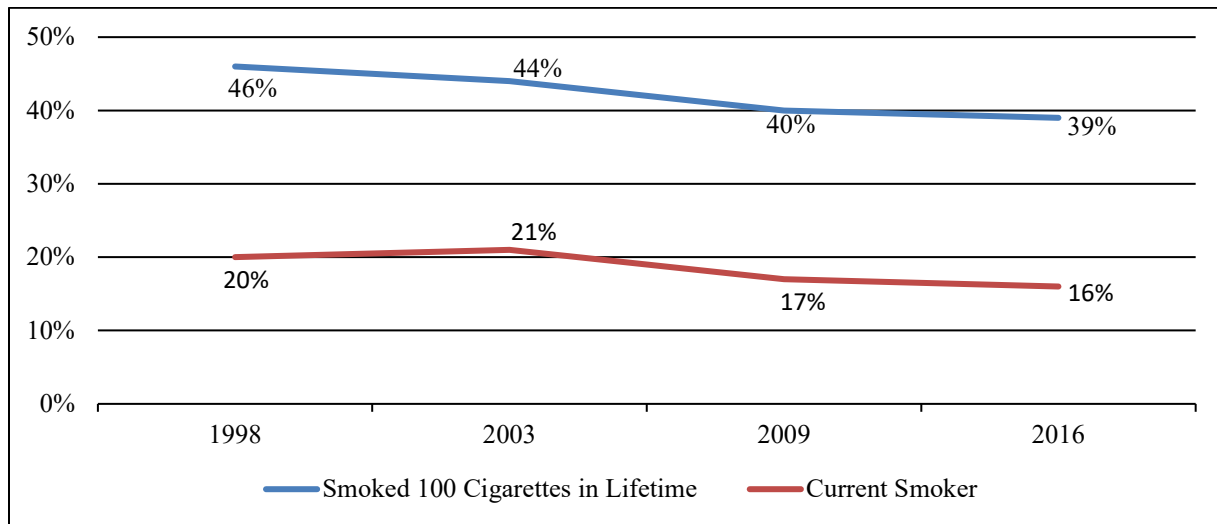
- With respect to tobacco product use in the last 12 months (Figure 10-1), cigarette use declined between 1998 and 2016 from 23%-24% at the outset of the period to 20% in 2009 and 2016. Cigar use decreased from 11% in 1998 to 6% in 2009 but has since increased to 9% in 2016. Chewing tobacco and pipe use remained at 1% to 2% for all survey years.

Figure 10-1: Tobacco Use, Last 12 Months: New Jersey, 1998-2016



- As shown in Figure 10-2, consistent decreases were also seen between 1998 and 2016 in the proportion of residents having smoked 100 or more cigarettes in their lifetime (46% in 1998 to 39% in 2016) and those classified as current smokers (21% in 2003 to 16% in 2016).

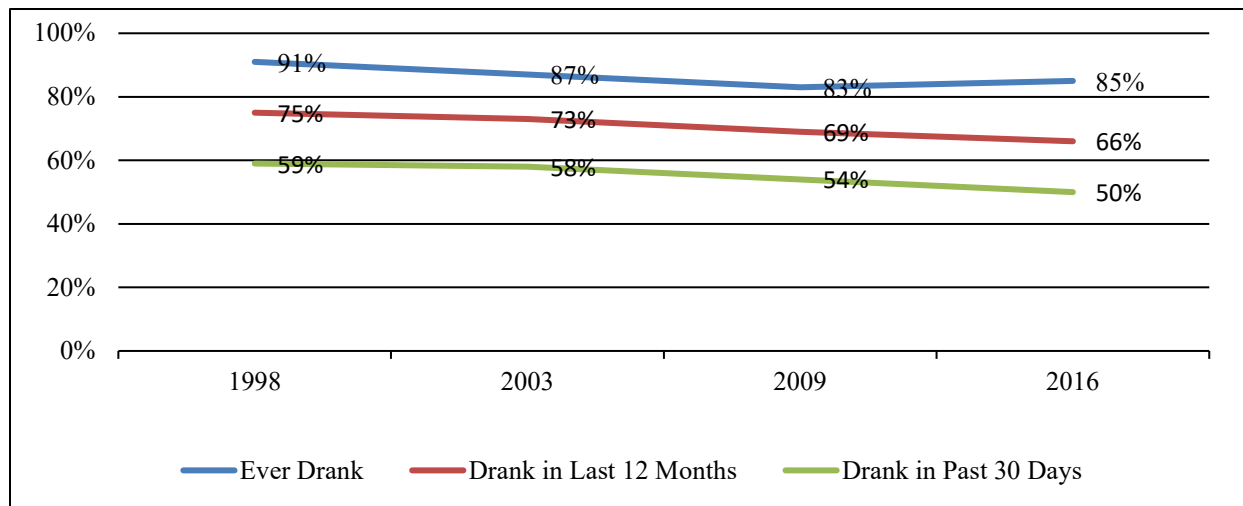
Figure 10-2: Cigarette Smoking: New Jersey, 1998-2016



Alcohol Use (Figure 10-3)

- Alcohol use among New Jersey residents experienced a steady decline from 1998 to 2016 with regard to lifetime use (91% to 85%); past year use (75% to 66%); and use in the past 30 days (59% to 50%).

Figure 10-3: Alcohol Use – Lifetime, Past Year, Past 30 Days: New Jersey 1998-2016



Demographic Characteristics of Current Smokers and Drinkers (Table 10-1)

Current Smokers

- Cigarette smoking among men has shown little variation across survey years, decreasing from 21% in 1998 to 19% in 2003 and 2009, then rising again to 21% in 2016 (Table 10-1). Women, in contrast, experienced a sharp decrease in cigarette use since 2003, dropping from 23% in 2003 to 16% in 2009 and 11% in 2016. This drop followed an increase from 19% to 23% between 1998 and 2003.
- Current smoking in all age groups remained stable or decreased in 2016 among all age groups. Among 18-25 year olds, smoking dropped from a high of 32% in 2003 to 21% in 2016. Decreases were also noted among those aged 35 to 49, with smoking dropping from 22% in 1998 and 2003 to 16% in 2016. Smoking also dropped from a high of 16% in 2003 to 12% in 2016 among those 50 and older. Among 26-34 year olds, smoking slightly increased from 21% to 25% between 1998 and 2003, then declined to 23% in 2009 and 2016.

- Cigarette smoking also decreased in all racial groups but Asians in 2016. Between 1998 and 2003, smoking increased among Blacks (18% to 24%), Hispanics (17% to 21%), and Asians (10% to 13%), with Whites being the only group that saw a slight decrease during that period (22% to 21%). Between 2003 and 2016, however, smoking decreased to 17% among Whites, 16% among Blacks and 14% among Hispanics. Asians were the only group in which smoking slightly increased, rising from 6% in 2009 to 8% in 2016.

Table 10-1: Past Month Use Cigarettes and Alcohol, New Jersey 1998-2016

Demographics		Smoked Last 30 Days (%)				Drank Last 30 Days (%)			
		1998	2003	2009	2016	1998	2003	2009	2016
Gender	Male	21	19	19	21	66	65	60	58
	Females	19	23	16	11	52	53	49	43
Age	18-25	29	32	26	21	58	56	49	37
	26-34	21	25	23	23	63	60	57	60
	35-49	22	22	18	16	64	62	59	51
	50+	14	16	13	12	53	56	52	52
Race/Ethnicity	White	22	21	18	17	65	65	62	60
	Black	18	24	20	16	39	43	39	38
	Hispanic	17	21	15	14	49	44	38	34
	Asian	10	13	6	8	40	39	35	29

Current Drinkers

- Both genders experienced an overall decrease in current alcohol use in 2016 relative to prior years (Table 10-1). From 1998 to 2016, use among men dropped from 66% to 65% to 60% to 58%, and use among women went from 52% up to 53% in 2003, then decreased to 49% in 2009 and 43% in 2016.
- By age, 18 to 25 year olds and 35 to 49 year olds saw steady declines in current drinking during the survey years, with drinking prevalence in 18 to 25 year olds dropping from 58% in 1998 to 37% in 2016. Similarly, among 35 to 49 year olds, rates dropped from 64% in 1998 to 51% in 2016. While 26 to 34 year olds showed a decrease from 63% in 1998 to 57% in 2009, the smoking rate in that age group increased to 60% in 2016. After an initial increase in smoking from 53% in 1998 to 56% in 2003, those 50 and older saw a decrease to 52% in 2009, which remained at the same level in 2016.
- Current drinking substantially declined between 1998 and 2016 among both Hispanics (49% to 44% to 38% to 34%), and Asians (40% to 39% to 35% to 29%). Among Whites, the decrease was less pronounced (65% to 65% to 62% to 60%) and

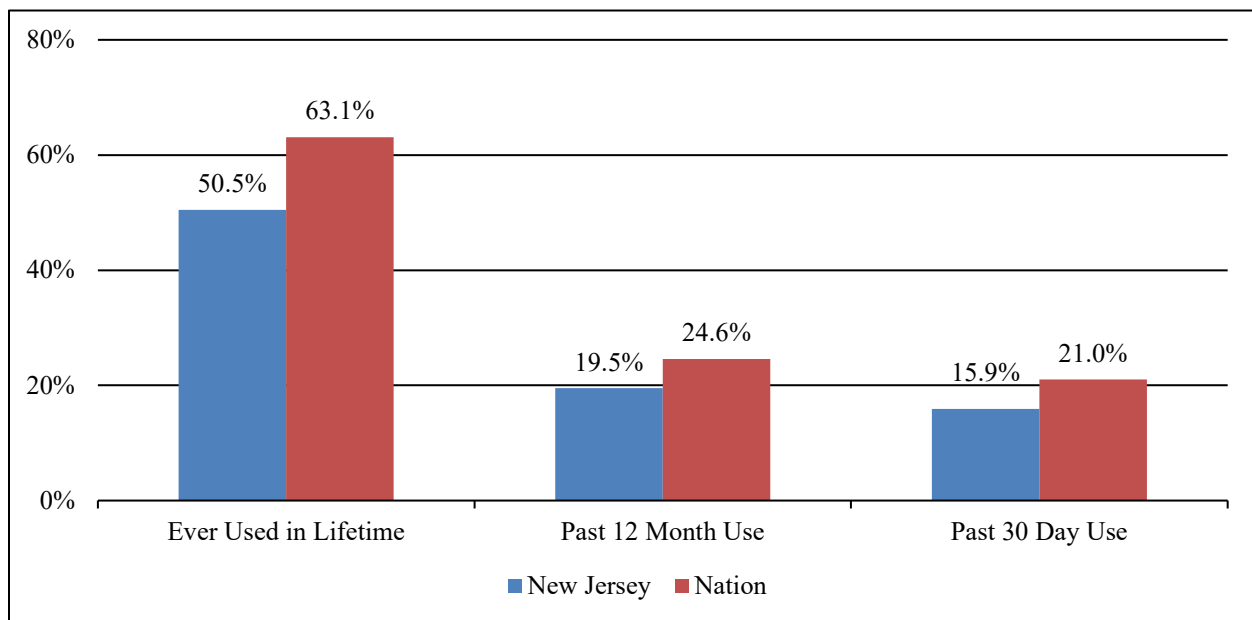
among African Americans, levels of drinking remained stable (39% to 43% to 39% to 38%).

C. NEW JERSEY (2016) AND THE NATION (2015)

Tobacco Use

- New Jersey rates of cigarette use remained well below national rates with respect to lifetime (51% vs. 63%), past 12-month (20% vs. 25%) and past 30-day (16% vs. 21%) smoking (Figure 10-4).

Figure 10-4: Use of Cigarettes in Lifetime, Last 12 Months and Last 30 Days among Residents 18 and Older: New Jersey (2016) and the Nation (2015)



Demographic Characteristics of Smokers: New Jersey and the Nation (Table 10-2)

- Smoking prevalence in New Jersey was lower than in the nation as a whole among both males (21% vs. 24%) and females (11% vs. 21%).
- By age, smoking prevalence ranged from 4 to 6 percentage points lower in New Jersey across all age groups compared to the nation as a whole.

- New Jersey smoking rates were also lower than national rates among Whites (17% vs. 22%) African Americans (16% vs. 23%) Hispanics (14% vs. 17%) and Asians (8% vs. 11%).
- Although New Jersey college graduates had smoking rates comparable to their national counterparts (9% vs. 10%, respectively), smoking rates were lower in New Jersey compared to the nation among those with less than a high school education (19% vs. 28%), high school graduates (19% vs. 27%) and some college education (20% vs. 23%).
- New Jersey also had lower smoking rates than the nation in all employment groups, including those working full-time (18% vs. 22%), part-time (10% vs. 19%) and among the unemployed (23% vs. 36%).

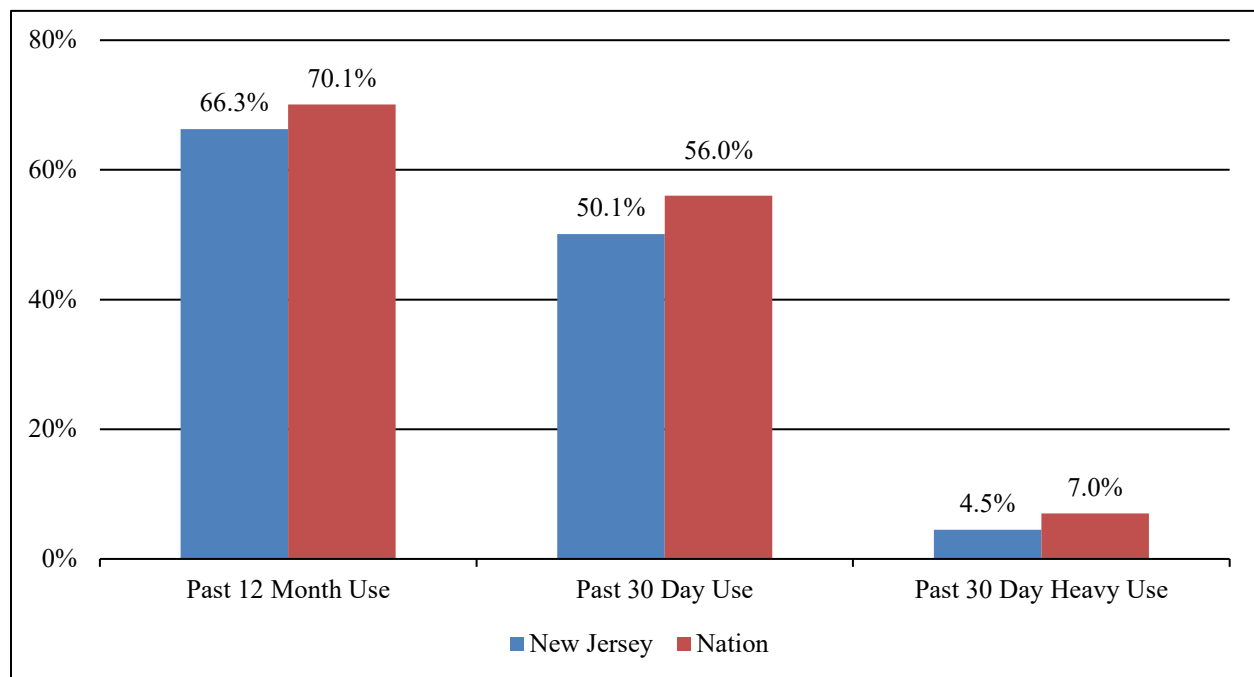
Table 10-2: Past 30 Day Use of Cigarettes among Residents Aged 18 and Older by Demographic Characteristics: New Jersey (2016) and the Nation (2015)

Demographics		New Jersey	Nation
<i>TOTAL</i>		<i>15.9%</i>	<i>21.0%</i>
Gender	Male	21.0	23.7
	Females	11.2	21.4
Age	18-20	16.4	21.6
	21-25	25.6	29.8
	26-34	23.1	29.3
	35+	13.9	17.9
Race/Ethnicity	White	17.4	22.0
	Black	15.6	23.5
	Hispanic	13.9	17.2
	Asian	7.5	10.6
Education	Less than H.S.	19.2	28.1
	H.S. Grad.	19.1	27.4
	Some College	20.1	23.5
	College Grad.	9.2	9.6
Employment	Employed Full-Time	17.9	21.7
	Employed Part-time	9.6	18.7
	Unemployed	23.2	36.2

Alcohol Use (Figure 10-5, Table 10-3)

- New Jersey residents were less likely than their national counterparts to have drunk alcohol in the past 12 months (66% vs. 70%) and in the past 30 days (50% vs. 56%). New Jerseyans were also somewhat less likely than residents nationally to report heavy drinking in the past 30 days (5% vs. 7%).

Figure 10-5: Use of Alcohol in Lifetime, Last 12 Months and Last 30 Days among Residents 18 and Older: New Jersey (2016) and the Nation (2015)



- Young New Jersey residents aged 18-25, were much less likely to drink in the past 30 days (37%) than those in the same age group nationally (58%). Among those aged 26 and above, however, rates of past 30-day drinking in New Jersey were comparable to national rates (53% in New Jersey and 56% in the nation).
- Whites in New Jersey (60%) were just as likely as Whites in the Nation (61%) to drink in the past 30 days; however past 30-day drinking was lower in New Jersey among African Americans (39% vs. 48%), Hispanics (34% vs. 48%) and Asians (29% vs. 43%).
- While those with a high school education have similar rates of drinking in the past 30 days as those in the Nation (47% each), all other education subgroups in New Jersey are much less likely to have done so when compared to similar subgroups in the Nation.

- By employment status, past 30-day drinking was lower in New Jersey among full-time (61% vs. 66%) and part-time (42% vs. 58%) workers, as well as those who were unemployed (38% vs. 50%).

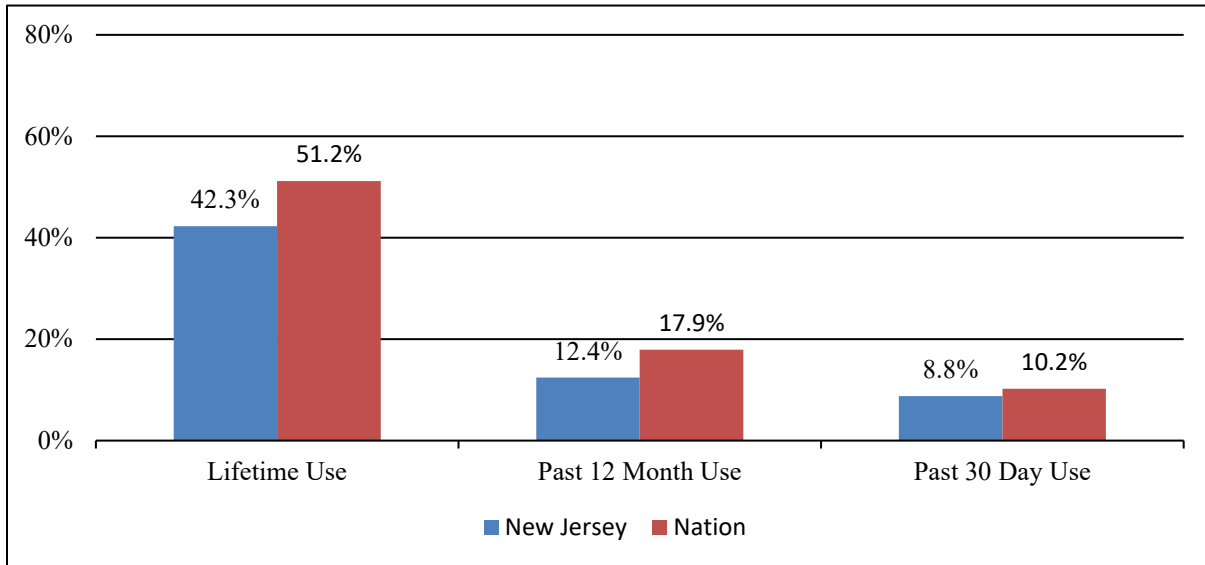
Table 10-3: Past 30 Day Use of Alcohol among Residents Aged 18 and Older by Demographic Characteristics: New Jersey (2016) and the Nation (2015)

Demographics		New Jersey	Nation
<i>TOTAL</i>		<i>50.1%</i>	<i>56.0%</i>
Gender	Male	57.6	61.3
	Females	43.0	51.1
Age	18-25	37.2	58.3
	26+	52.8	55.6
Race/Ethnicity	White	60.1	60.9
	Black	38.5	48.3
	Hispanic	33.9	47.5
	Asian	29.1	42.9
Education	Less than H.S.	22.5	35.4
	H.S. Grad.	47.3	46.8
	Some College	52.0	60.2
	College Grad.	60.2	69.2
Employment	Employed Full-Time	60.6	66.2
	Employed Part-time	41.6	57.7
	Unemployed	37.9	50.0

Illicit Drug Use (Figure 10-6, Table 10-4)

- New Jersey residents reported lower rates of illicit drug use rates in their lifetime (42% vs. 51%) and the past year (12% vs. 18%) than Americans nationwide, but past 30 day use of illicit drugs was comparable (9% vs. 10%).

Figure 10-6: Use of Illicit Drugs in Lifetime, Last 12 Months and Last 30 Days among Residents 18 and Older: New Jersey (2016) and the Nation (2015)



- While men in New Jersey were only slightly less likely to have used illicit drugs in the past 12 months than males in the nation (18% vs. 21%), women in New Jersey were half as likely to have done so as women in the nation as a whole (7% vs. 15%).
- New Jerseyans older and younger than 26 were both less likely than their national counterparts to have used illicit drugs in the past year. For those 18-25, 30% of New Jerseyans used illicit drugs compared to 38% in the nation; and for those 26+, 10% of New Jerseyans did so compared to 15% in the country as a whole.
- By race/ethnicity Whites in New Jersey (15%) were slightly less likely to have used illicit drugs in the past year than Whites in the Nation (18%). However, drug use was substantially lower in New Jersey than the nation as a whole among African Americans (10% vs. 21%) and Hispanics (7% vs. 17%).
- Those with a high school education in New Jersey and the Nation had similar illicit drug use rates in the past year (18%); however, drug use rates in New Jersey were lower than the Nation in all other educational groups, including those with less than a high school education (11% vs. 17%), some college (13% vs. 21%) and college graduates (8% vs. 15%).

- New Jersey residents in each employment group reported lower rates of drug use in the past 12 months than all Americans, including those employed full-time (13% vs. 19%), those employed part-time (12% vs. 23%), and those unemployed (17% vs. 30%).

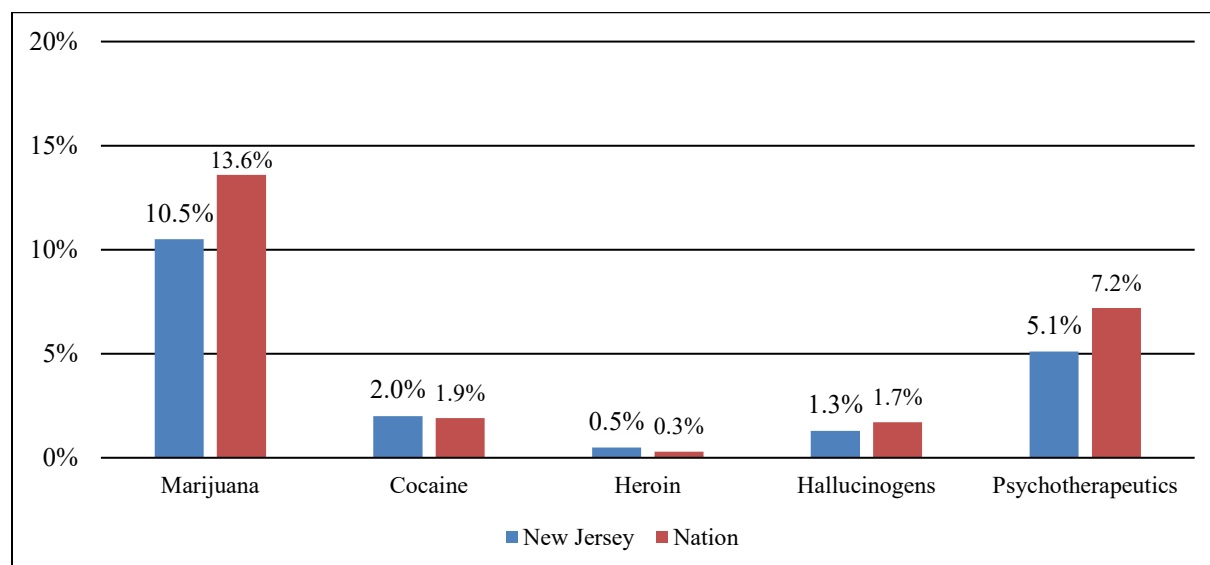
Table 10-4: Past 12 Month Use of Illicit Drugs among Residents Aged 18 and Older by Demographic Characteristics: New Jersey (2016) and the Nation (2015)

Demographics		New Jersey	Nation
<i>TOTAL</i>		<i>12.4%</i>	<i>17.9%</i>
Gender	Male	17.8	20.9
	Females	7.3	15.1
Age	18-25	30.0	37.5
	26+	9.8	14.6
Race/Ethnicity	White	14.6	17.9
	Black	9.6	21.0
	Hispanic	6.7	17.0
Education	Less than H.S.	10.8	16.9
	H.S. Grad.	17.7	18.1
	Some College	12.9	21.1
	College Grad.	8.4	14.8
Employment	Employed Full-Time	12.8	18.9
	Employed Part-time	12.0	22.5
	Unemployed	16.8	30.2

Type of Illicit Drug Use (Figure 10-7, Table 10-5)

- New Jersey had slightly lower or equivalent rates of use of each type of drug in the past year as the Nation as a whole. Use of marijuana (11% vs. 14%) and psychotherapeutics (5% vs. 7%) were slightly lower in New Jersey, whereas use of cocaine (2% each), hallucinogens (1% vs. 2%) and heroin (under 1% each) were comparable in New Jersey and the Nation.

Figure 10-7: Use of Specific Illicit Drugs in the Past 12 Months: New Jersey (2016) and the Nation (2015)



- By age, patterns of 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. Overall, however, marijuana and psychotherapeutic drug misuse is slightly lower in New Jersey than the Nation for both age groups.

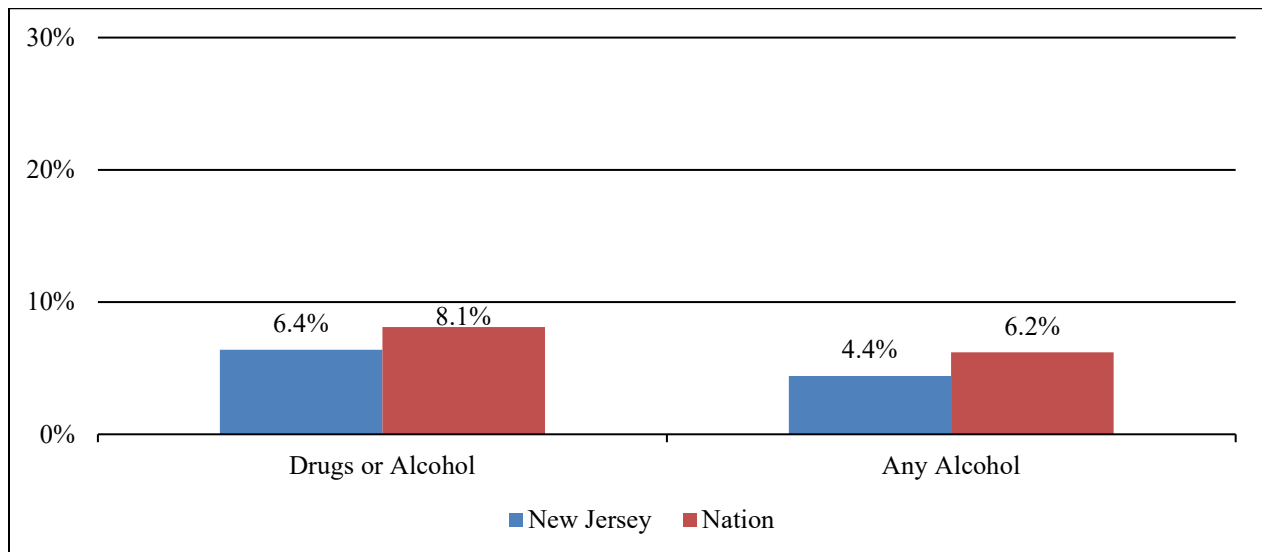
Table 10-5: Illicit Drugs Used in Past 12 Months by Age: New Jersey (2016) and the Nation (2015)

	New Jersey		Nation	
	18-25	26+	18-25	26+
Marijuana	28.5	7.8	32.2	10.4
Cocaine (includes use of crack)	4.1	1.6	5.4	1.3
Heroin	0.0	0.6	0.6	0.3
Hallucinogens	5.5	0.6	7.0	0.8
Psychotherapeutics	12.4	4.0	15.3	5.8

Substance Abuse and Dependence (Figures 10-8, 10-9)

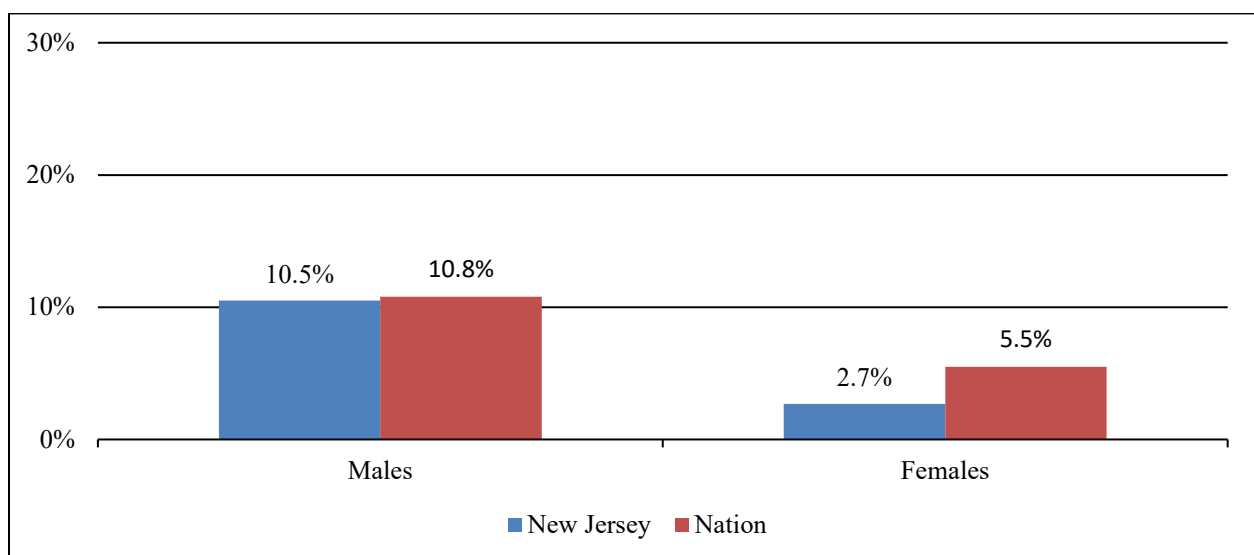
- Rates of abuse or dependence on drugs or alcohol were somewhat lower in New Jersey than in the nation as a whole (6% vs. 8%).
- Similarly, New Jersey residents were less likely than the nation as a whole to abuse, or be dependent on, alcohol, either with or without the co-occurring use of drugs. Thus, 4% of New Jersey residents, compared to 6% of residents nationally, met criteria for alcohol abuse or dependence.

Figure 10-8: Past Year Abuse of, or Dependence on, Drugs or Alcohol: New Jersey (2016) and the Nation (2015)



- By gender, males in New Jersey had similar rates of substance abuse or dependence that were similar to males in the nation as a whole (approximately 11% for both groups).
- New Jersey females had substantially lower rates of abuse or dependence than females nationally (3% vs. 6%).

Figure 10-9: Past Year Drug or Alcohol Abuse or Dependence among Residents 18 and Older by Gender: New Jersey (2016) and the Nation (2015)



CHAPTER 11

CONCLUDING REMARKS

The 2016 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.

TRENDS IN SUBSTANCE USE AND MENTAL HEALTH

Mental Health

The 2016 survey was the first New Jersey Household Survey to systematically assess the mental health status of New Jersey residents, with results suggesting that a sizeable portion of New Jersey residents suffer from mental health symptoms. Over 16% of residents screened positive for current symptoms of one or more of the three mental health conditions assessed, including 11% who had symptoms of anxiety and 7% each, of depression and PTSD. While the screening assessments used in this survey were not equivalent to a professional psychiatric evaluation, the overall New Jersey survey estimate of 16% is nevertheless consistent with the 2014-2015 NSDUH estimates, obtained using different assessment techniques, that show 16.19% of New Jersey residents meet criteria for “any mental illness”⁸ (Center for Behavioral Health Statistics and Quality, 2016).

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. Among residents with any positive mental health screens, those with PTSD symptoms were most at risk for alcohol abuse/dependence, with 10% screening positive for alcohol dependence compared to only 4% of those with no positive mental health screens. Similarly, those with depression symptoms were most at risk for drug abuse/dependence, with 9% screening positive compared to only 3% of those screening negative for mental health problems. 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).

⁸ 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)”.

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 and important disparities in treatment access continue to exist (see discussion below). 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: E-Cigarettes and Synthetic Marijuana

New Jersey and other states are currently in the midst of a deadly national opioid epidemic, and most state and national efforts are rightfully focused on addressing this national crisis. The full extent of this epidemic in New Jersey, however, is not adequately reflected in the results of the present survey due to the limitations of household surveys in measuring illegal behaviors like heroin and prescription opioid misuse that underlie the current crisis. As explained in the Introduction, this is often due to the fact that users of heroin and other illegal substances are frequently not reachable by telephone and/or are likely to provide untruthful responses.

Two substance use trends which did emerge from the current survey, however, and which suggest the need for further monitoring relate to the use of e-cigarettes and synthetic marijuana. These are discussed below.

E-Cigarettes

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, 24% of young adults between the ages of 18 and 24 have used e-cigarettes and 10% have used them in the last 30 days. Although not as high as use rates among their national counterparts (36% ever used e-cigarettes and 14% used in last 30 days), rates of e-cigarette use

in New Jersey young adults are about 3 times the use rates of New Jersey residents older than 24. Further, while older adults cited health and a desire to reduce or quit smoking tobacco cigarettes as their main reasons for use, 18-20 year olds cited curiosity and other non-health related reasons, such as peer pressure and aroma or taste. This raises the concern that young people who experiment with e-cigarettes out of curiosity or peer pressure may become addicted to nicotine and graduate to tobacco cigarette use as they get older. While New Jersey currently bans e-cigarette sales to anyone under age 19, and is currently developing legislation to ban flavored e-cigarettes, continuing to monitor usage among youth and young adults should remain a public health priority.

Synthetic Marijuana

In 2016, NIDA issued a series of alerts about an increase in adverse events in several southern and Northeastern states related to the use of synthetic cannabinoids, also known as synthetic marijuana or “herbal incense” (National Institute on Drug Abuse, July, 2016). First reported in the U.S. in 2009, synthetic cannabinoid poisonings increased each year through 2015, when 7,779 exposures were reported to poison control centers throughout the nation. While this number decreased substantially in 2016 to 2695, the distribution and use of these substances remain cause for serious concern.

The current survey results suggest that rates of synthetic cannabinoid use among young people in New Jersey are high, with use reported by 13% of all 18-20 year olds, and 47% of 18-20 year olds who ever used marijuana. Moreover, recent news reports suggest that, despite 2013 New Jersey legislation banning the manufacture, distribution or possession of these substances, the distribution and use of synthetic marijuana in New Jersey persists. In April, 2017, for example, 70 people were sickened in Newark after ingesting synthetic marijuana, and in May, 2017, police seized over 140 grams of the substance in Paterson (NJ.com, May, 2016).

While New Jersey has taken important steps to limit their availability and use, it is thus important that state efforts at monitoring and controlling synthetic cannabinoids continue. In particular, efforts should focus on public awareness campaigns and prevention efforts targeting youth, especially those who already use natural marijuana.

POPULATIONS AT RISK

The report findings revealed specific subpopulations that substantially exceeded state averages with respect to substance use and/or mental health disorders, suggesting a special need to target these populations for prevention and treatment. A description of the four populations for whom behavioral health issues were of notable concern appears below.

Young Adults

Young adults under age 26 were found to be at multiple risk of mental health and substance abuse problems. Young people used illicit substances at 2-3 times the rate of New Jersey residents as a whole, with 33% of 21 to 25 year-olds and 27% of 18 to 20 year-olds reporting past-year use of at least one illicit drug compared to only 12% of all New Jersey residents. Further, young adults under age 26 used multiple drugs at nearly three times the state average and were also substantially more likely to use synthetic marijuana, smoke tobacco cigarettes and use e-cigarettes than state residents as a whole. 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 16% of the population as a whole. The multiple mental and behavioral health challenges faced by young adults in New Jersey suggest that this population should be prioritized as targets for state mental health and substance abuse prevention, early intervention and treatment efforts, with a specific focus on colleges and other venues serving young adults.

Frequent Gamblers

New Jersey residents who gambled about once a week or more (defined as frequent gamblers for this study) were at significantly increased risk for substance abuse compared to other residents. Compared to non-gamblers, frequent gamblers were three times as likely to be current smokers (34% vs. 10%), eighteen times as likely to drink heavily (18% vs. 1%), and more than six times as likely to use illicit drugs (38% vs. 6%). Cocaine, in particular, was used at alarmingly high rates by frequent gamblers, reported by 15% of frequent gamblers vs. only 1% of non-gamblers. Moreover, frequent gamblers constitute about 8% of the New Jersey adult population, or about 547,000 people.

These findings suggest that the negative social and economic consequences of frequent and problem gambling are compounded by alarmingly high rates of substance abuse. Gambling problems in New Jersey, moreover, are further exacerbated by the widespread adoption of legalized forms of gambling on a scale exceeding that of other states. In 2012, New Jersey ranked 6th out of 50 states in combined lottery sales and commercial and Indian casino gaming revenues (Marotta et al., 2014). At the same time, however, New Jersey was 29th in the nation in 2013 in terms of per capita funds invested in problem gambling services. While the average national per capita public expenditure for gambling services in 2013 was 39 cents, New Jersey's public per capita expenditure was 10 cents (Marotta et al., 2014). Given the high prevalence of gambling in New Jersey and its association with alarmingly high rates of co-occurring substance abuse, greater public expenditures on prevention and treatment services for problem gamblers could help alleviate the social, economic and human costs of this important problem.

Low Income and Unemployed Populations

Low income populations were also at substantially higher risk of mental health problems than other New Jersey residents, with the risk of having at least one disorder being 75% higher in those earning under \$25,000/year and 69% higher in the unemployed than the risk in residents as a whole. Moreover, disparities in mental health status were significantly more pronounced when low income households were compared to those at the highest income levels. Thus, those with incomes less than \$25,000 were more than three times as likely to screen positive for any mental health disorder as those with incomes of \$100,000 or more (28% vs. 8%). Income-based disparities in rates of depression and PTSD were especially pronounced, with the lowest income householders screening positive for these disorders at 6-7 times the rate of those in the highest income category. Enhanced mental health screening at healthcare venues that traditionally serve low income populations, such as federally-qualified health centers, would aid in the better identification of individuals at risk, an initiative, moreover, which is already underway in New Jersey. Additionally, the development of creative healthcare financing mechanisms to fund mental health services for low income populations should continue to be explored.

African Americans and Hispanics

African Americans and Hispanics were at higher risk of mental health problems than members of other ethnic groups. Overall, African Americans and Hispanics screened positive for one or more mental health problems at rates that were 25% higher than the White rate and 50% higher than the rate for Asians. African Americans, in particular, were at special risk for depression, with 13% screening positive for this disorder, which was more than double the depression rate of Whites (6%) and more than triple the rate found in Asians (4%). These data suggest that African American and Hispanic residents would benefit from more targeted screening efforts aimed at boosting mental health problem identification and facilitating subsequent access to treatment.

TREATMENT ACCESS

Access to treatment among those in need was generally low for both mental health and substance abuse/dependence. However, the gap between treatment need and treatment access was most pronounced with respect to substance abuse. Thus, only 38% of those needing substance abuse treatment had received it in their lifetimes, and only 16% had been treated in the last year. In contrast, approximately 58% of those needing mental health treatment had obtained it at some time in their lives, and 32% had been treated in the last 12 months. Gaps in service access were

especially pronounced for specific subpopulations in need. These disparities are described for substance abuse and mental health treatment below.

Substance Abuse Treatment

One of the greatest disparities in access to substance abuse treatment related to addiction type, with individuals having alcohol-only problems being substantially less likely than those with drug problems to have accessed treatment in the past 12 months. Thus, 3% of residents having only an alcohol problem had been treated in the past year, compared to 32% of those with only a drug problem and 23% of those with both alcohol and drug problems. However, rates of lifetime treatment access were similar across addiction types, with 37% of residents with only a drug problem, 39% of residents with only an alcohol problem, and 39% of residents with both a drug and alcohol problem, accessing treatment at some point in their lifetime. Women and Hispanics represented additional populations in which access to treatment was especially low, with women being almost half as likely as men to report formal addiction treatment in their lifetime (27% vs. 42%), and Hispanics having a lifetime treatment rate (13%) that was less than one third of Whites (41%) and African Americans (50%).

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 use alcohol. In the present survey, those with alcohol abuse/dependence were much more likely than those with drug abuse/dependence to cite the belief that they didn't need treatment or could handle the problem themselves as barriers to treatment-seeking. Due to sample size limitations of the present survey, however, relationships between barriers to treatment and addiction type should receive more careful study in subsequent surveys.

Higher treatment rates among men may reflect higher rates of male criminal justice involvement, leading to greater treatment access as a result of court mandates and prison diversionary programs. Although African Americans actually reported lower rates of substance use than White residents, African Americans are disproportionately represented in the criminal justice system and, as a result, may have also gained greater treatment access through criminal justice pathways.

Mental Health Treatment

Similar disparities in treatment access were noted with respect to mental health, with those populations having the greatest need for mental health treatment often being the least likely to receive it. Thus, although young adults, African Americans and Hispanics had especially high rates of mental health symptoms, their rates of treatment access were exceptionally low. This was especially true for symptomatic young adults aged 18-25, only 7% of whom had been treated in the last year. In contrast, 29%-51% of symptomatic residents in age groups older than 25 had received past-year treatment. Similarly, White residents with mental health symptoms

were substantially more likely to have accessed treatment in the last 12 months than symptomatic African Americans or Hispanics (45% vs. 19% and 18%, respectively).

While this survey did not explore barriers to mental health treatment, studies of mental health treatment-seeking in African American and Latino populations have identified a variety of barriers limiting treatment access, including language fluency, cultural differences in the recognition of, and treatment beliefs regarding, mental health problems, lower access to Medicaid specialty services and lower access to quality mental health care (Alegria, et al. 2002). With respect to age, studies have noted that young adults generally have significantly less positive attitudes toward mental health treatment than their older counterparts, expressing less comfort than older individuals in talking to a mental health professional and greater embarrassment in revealing mental health treatment to friends (Gonzalez et al., 2005).

Policy Implications

Given the wide ranging population differences observed in this study in access to both mental health and addiction treatment, it is vital that New Jersey continue its efforts to identify and reduce barriers to care among those populations most in need. While the criminal justice system represents an important route to substance abuse treatment for many, women and other populations with lower criminal justice involvement may need to be targeted for special outreach and intervention efforts. Similarly, both mental health and substance abuse treatment programs need to continue to stress cultural competence in their delivery of services, so that minority populations feel comfortable seeking and receiving care. Finally, special prevention and early intervention programs are needed for young adults in order to promote timely identification of mental health problems and greater awareness and acceptance of mental health treatment.

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